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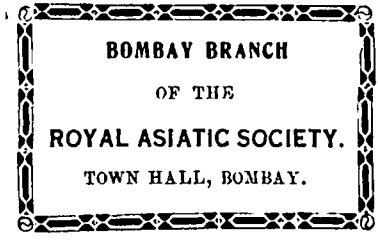

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ENGLISH BOTANY;

OR

COLOURED FIGURES

OF

BRITISH PLANTS,

WITH THEIR

ESSENTIAL CHARACTERS, SYNONYMS, AND PLACES OF GROWTH.

TO WHICH WILL BE ADDED

OCCASIONAL REMARKS

BY

JAMES EDWARD SMITH, M.D. F.R.S.

MEMBER OF THE ROYAL ACADEMIES OF TURIN, UPSAL, STOCKHOLM, LISBON, ETC. ETC.

PRESIDENT OF THE LINNEAN SOCIETY.

55373

THE FIGURES BY

JAMES SOWERBY, F.L.S.

—" VIRESQUE ACQUIRIT EUNDO. " *Virg.*

ol. 34 VOLS.

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1803.

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55373

INDEX

OF THE ENGLISH NAMES

IN VOL. XXXIV.

	Tab.
CAREX, scorched alpine	2404
Cinquef l, trifid-leaved	2389
Cistus, um-leaved	2414
Conferv , ciliated forcipated	2428
, long-pointed	2429
, scattered spongy	2427
Cotton-grass, round-headed	2387
, slender mountain	2402
Crowfoot, alpine white	2390
Feather-m ss, clustered	2407
,dark round-branched	2422
--, depressed	2406
--, matted	2421
--, straw-like	2405
--, taper-branched	2420
Flea-bane, pale-rayed mountain	2416
Fork-moss, celsian	2418
, swelling	2419
Fringe-moss, dwarf	2380
-, glaucous	2381
Fucus, prickly	2445
Garlick, chive	2441
Gland-moss, elliptical	2417
Hair-moss, close-leaved	2435
Hart-wort, small	2440
Hawkweed, honeywort-leaved	2378
, shaggy alpine	2379
Jungermannia, curled	2437
-, forcipated	2436
-, juniper	2443
Lepraria, black	2409
, ochrey	2408
Lichen, dot-shaped tubercled	2412
, fence	2386
, fingered cup	2439
, fringed cup	2438
Lichen, minute pin-headed	2385
, perforate-shielded	2423
, pointed shrubby	2444
Mint, fragrant sharp-leaved	2415
, spear	2424
Mug-wort, blueish	2426
Raspberry	2442
Rose, cinnamon	2388
Sampire, prickly	2413
Screw-moss, bearded lateral	2391
, convoluted	2382
, deciduous	2392
, rib-sheathed	2383
, sharp-pointed	2393
, starry furrowed	2384
Scurvy-grass, Greenland	2403
Sow-thistle, blue	2425
Spiloma, microscopic	2396
, scattered greenish	2398
, staining	2399
, wall	2397
Strawberry-tree	2377
Thread-moss, long-stalked	2394
, rosaceous thyme	2395
-, slender proliferous	2433
-, starry-leaved	2434
Tremella, Jew's-ear	2447
, mulberry	2446
, witches' butter	2448
Variolaria, ash-coloured	2411
, greyish-green	2400
, milky-white	2410
, sprinkled	2401
Water-moss, bristly	2432
Willow, blue	2431
, common white	2430

2377
587.

Arbutus Unedo.

ARBUTUS Unedo.

Strawberry Tree.

DECANDRIA Monogynia.

GEN. CHAR. *Cal. deeply* 5-cleft. *Cor.* ovate; its orifice 5-cleft; its base transparent. *Berry* superior, 5-celled. *Anthers* with 2 pores.

SPEC. CHAR. Stem arboreous. Leaves smooth, bluntly serrated. Panicle terminal. Berry with many seeds.

SYN. Arbutus Unedo. *Linn. Sp. Pl.* 566. *Suppl.* 238. *Sm. Fl. Brit.* 442. *Huds.* 177. *With.* 399. *Hull. ed.* 2. 121. *Dicks. H. sicc. fasc.* 13. 16. *Mill. Ic. t.* 48.

Arbutus. *Raii Syn.* 464. *Ger. em.* 1496.

LIMESTONE rocks, which make a part of the beautiful scenery about the lake of Killarney, in the west of Ireland, are copiously adorned with this beautiful tree, now completely naturalized: though some have suspected that it might have been brought by the monks, formerly settled there, from France or Italy. The place in which it grows is certainly so analogous to its stations in the south of France, and the climate so mild, that it may well be deemed indigenous. In our gardens, from whence this specimen was taken, the *Arbutus* is tolerably hardy, though the fruit is seldom seen much to the north of London. It ripens in autumn from the blossoms of the autumn preceding, but however tempting in appearance, its vapid flavour is such, that the Latins named it *Unedo*, as if nobody would wish to eat more than one.

This is a bushy tree, with a reddish bark, the young shoots often bright red, and rough with glandular hairs. Leaves alternate, stalked, elliptic-lanceolate, unequally and bluntly serrated, smooth, except the rib, shining, veiny, evergreen. Panicles drooping, composed of a few racemose branches, with an oblong bractea under each flower. The corolla is of a greenish semipellucid white, sometimes tinged with red, inodorous. Anthers pendulous, awned at the base. Fruit crimson, tuberculated all over, resembling a strawberry, but the seeds are internal.

HIERACIUM cerinthoides.

Honeywort-leaved Hawkweed.

SYNGENESIA Polygamia-æqualis.

GEN. CHAR. *Recept.* nearly naked; dotted. *Cal.* imbricated, ovate. *Down* simple, sessile.

SPEC. CHAR. Stem corymbose, solid. Leaves hairy, with a few small teeth; the upper oblong, half clasping the stem; the radical ones obovate, with fringed footstalks.

SYN. Hieracium cerinthoides. *Linn. Sp. Pl.* 1129. *Sm. Tr. of Linn. Soc. v.* 9. 242. *Gouan. Illustr.* 58. *t.* 22. *f.* 4. *Villars. Dauph. v.* 3. 110. *t.* 32.

SENT from the Highlands of Scotland, by its discoverer Mr. George Don, who informs us this species is by no means uncommon there, upon rocks, though hitherto not admitted into any British Flora. It flowers in August and is perennial.

The stem is eighteen inches or two feet high, erect, round, more or less leafy, solid, bearing at the summit several moderately large yellow flowers, on hispid and downy stalks, in a corymbose form. Leaves all somewhat glaucous, opaque, with a very smooth appearance, except that their edges and ribs are fringed with fine long hairs. The radical ones are lanceolate inclining to obovate, on long fringed bordered stalks; the uppermost dilated and partly clasping the stem at their base, with taper points. Scales of the calyx taper-pointed. Seed-down copious, minutely rough. Mr. Don's specimen has scarcely more than one or two minute teeth at the edges of a few of the stem-leaves. Some in Mr. Davall's collection, like that of Linnæus, are more toothed. The leaves all vary in breadth.

2379.
Hieracium
Hallori.

HIERACIUM villosum.

Shaggy Alpine Hawkweed.

SYNGENESIA Polygamia-æqualis.

GEN. CHAR. *Recept.* nearly naked, dotted. *Cal.* imbricated, ovate. *Down* simple, sessile.

SPEC. CHAR. Stem leafy, slightly branched. Leaves wavy or toothed, rough with long hairs; the radical ones lanceolate; the rest ovate or oblong.

SYN. Hieracium villosum. *Linn. Sp. Pl.* 1130. *Sm. Fl. Brit.* 833. *With.* 687. *Hull. ed.* 2. 232. *Dicks. Tr. of Linn. Soc. v.* 2. 288. *Jacq. Austr. t.* 87.

H. quintum villosum. *Clus. Hist. v.* 2. 141. *Ger. em.* 301.

FEW plants, in our British list, are more involved in obscurity than *H. villosum*, whose synonyms were misapplied by Ray and Dillenius to our *alpinum*, *t.*1110. Native specimens of *villosum* we have never seen, that in our plate, though originally brought from Ben Lawers, having flowered in a garden under the care of the late Mr. J. Mackay. It is certainly much more luxuriant, and branched from the base, than any of our native Swiss specimens, but the latter show this species to be extremely variable. Characteristic marks of it are the copious long shaggy hairs, bulbous at their base; the lanceolate stalked radical leaves, either wavy or toothed' whose under side has a pale and glaucous hue; and the large lemon-coloured flowers, solitary at the top of each stem or branch, whose numerous narrow acute dark calyx-scales are somewhat glaucous, and excessively hairy. The stem leaves in our Scottish specimens are oblong and narrow; those of the foreign ones ovate, at least in part, which raises more doubt in our minds than any other circumstance. So much still remains to be done in this genus, that we pretend not to perfect certainty.

The plant before us has a woody perennial root, and flowers in August. The seed-down is rough, and rather short.

2380

1676.

Didymodon pusillus.

This was published by J. & C. Sowerby, London.

TRICHOSTOMUM pusillum.

Dwarf Fringe-moss.

CRYPTOGAMIA Musci.

GEN. CHAR. *Caps.* oblong. *Fringe* of 32 capillary, straightish teeth, approximated or united in pairs.

SPEC. CHAR. Leaves concave at the base, with a long taper point. Capsule cylindrical, somewhat ovate. Lid awl-shaped. Stem perfectly simple.

SYN. Trichostomum pusillum. *Hewd. Crypt. v.* 1. 74. *t.* 28. *Sm. Fl. Brit.* 1237.

Didymodon pusillum. *Hewd. Sp. Musc.* 104. *Swartz. Musc. Suec.* 29.

Bryum pusillum. *Dicks. Crypt. fasc.* 2. 6. *With.* 812. *Hull.* 257.

GATHERED by Mr. Dickson in sandy ground. It is annual, bearing fruit in the spring. Our specimens were communicated by Dr. Swartz; Mr. Dickson, though he has liberally supplied us with nearly all his rarest mosses, not having been able to furnish this; but there is no doubt about the species or its synonyms.

The root is small and fibrous. Stem solitary, short and perfectly simple, leafy. Leaves light green, imbricated every way, sometimes leaning to one side, capillary, acute, entire with a dilated concave sheathing base and a single midrib. Fruitstalk terminal, erect, slender, scarcely an inch high, tawny or rose-coloured, shining. Capsule erect, smooth, and even, light brown, cylindrical inclining to ovate, rather short. Lid tapering, oblique, red at the base, about half as long as the capsule. Fringe of thirty-two upright red teeth, in pairs.

2381

1666.

Didymodon glaucescens.

TRICHOSTOMUM glaucescens.

Glaucous Fringe-moss.

CRYPTOGAMIA Musci.

GEN. CHAR. *Caps.* oblong. *Fringe* of 32 capillary, straightish teeth, approximated or united in pairs.

SPEC. CHAR. Leaves linear-lanceolate, acute, rather glaucous. Capsule ovate, slightly furrowed. Stem erect, somewhat branched.

SYN. Trichostomum glaucescens. *Hedw. Sp. Musc.* 112. *Crypt. v.* 3. 103. *t.* 37, B. *Sm. Fl. Brit.* 1245. *Swartz. Musc. Suec.* 30.

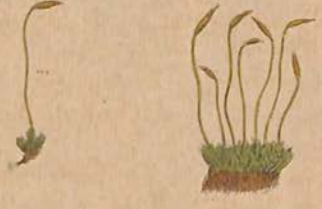
Bryum glaucescens. *Dicks. Crypt. fasc.* 4. 10.

DISCOVERED in shady rather mountainous situations in Scotland by Mr. Dickson, whose specimens, in Mr. Turner's collection, we have compared with ours.

The stems compose perennial tufts, scarcely half an inch high, and are erect, generally branched, densely leafy. Leaves nearly erect, a little incurvated when dry, of a light rather glaucous green, linear-lanceolate, broad at the base, taper-pointed but not awned, entire, keeled, with a midrib. Fruitstalks terminal, erect, slender, pale yellow. Capsule upright, ovate, of a light shining brown, and a thin substance, slightly and unequally furrowed. Lid tapering, oblique, broad and reddish at the base, half as long as the capsule. Fringe red, about half as long as the lid. There is a slight stricture, just above the base of the capsule, giving the appearance of an *apophysis*, but merely owing to the internal cavity, or lining, not extending quite so low as the outer coat. The general aspect of this pretty moss is not unlike *Dicranum polycarpum*, *t.* 2269; but their characters are abundantly distinct, and the present is a smaller plant.

2362

16.50



Tortula convoluta.

Published by J. & A. Arch, Cadogan Place.

TORTULA convoluta.

Convoluted Screw-moss.

CRYPTOGAMIA Musci.

GEN. CHAR. *Fringe* simple, of numerous capillary teeth, spirally and repeatedly twisted together.

SPEC. CHAR. Branches short. Stem-leaves lanceolate, keeled; those of the sheath obtuse, convoluted, and ribless. Lid taper, oblique.

SYN. Tortula convolutar. *Sm. Fl. Brit.* 1253. *Turn. Musc. Hib.* 49. *Sibth.* 285.

Barbula convoluta. *Hedw. Sp. Musc.* 120. *Crypt. v.* 1. 86. *t.* 32; excluding the synonym of Linnæus.

Bryum convolutum. *Dicks. Crypt. fasc.* 2. 6. *H. Sicc. fasc.* 1. 20. *With.* 816. *Hull.* 254. *Relh.* 427. *Abbot.* 237.

B. setaceum. *Huds.* 481. *Lightf.* 729.

B. stellare nitidum pallidum, capsulis tenuissimis. *Dill. Musc.* 381. *t.* 48. *f.* 44.

B. trichoides exile pallidum, erectis capitulis e surculis annotinnis egredientibus. *Raii. Syn.* 96.

THIS is found upon sandy heaths, dry banks and walls, in various places, bearing fruit in winter and spring. Dillenius says it is extremely abundant about Oxford. The roots are perennial. The stems form broad, dense but very little elevated patches, their branches being extremely short. The leaves also are short, of a full bright green, imbricated, spreading, lanceolate or somewhat ovate, bluntish, entire, pointless keeled, with a strong rib. The sheaths which envelop the base of the fruitstalks are very large in proportion, standing between the branches, solitary, conspicuous for their very pale green colour, and composed of a few broad, tumid, convoluted leaves or scales, which are quite destitute of rib or veins, and blunt, with or without a small point, at their summits. Fruitstalks solitary, slender, an inch high, of a pale shining yellow. Capsule slender, nearly cylindrical, incurved, pale brown, smooth. Lid half its length, awlshaped, slender, brownish, oblique.

Hedwig and Hudson mistook this for the Linnæan *Mnium setaceum*, Linnæus having misapplied the synonym of Dillenius to that moss.

TORTULA nervosa.

Rib-sheathed Screw-moss.

CRYPTOGAMIA Musci.

GEN. CHAR. *Fringe* simple, of numerous capillary teeth, spirally and repeatedly twisted together.

SPEC. CHAR. Stem much branched. Leaves all ovate, acute, keeled, with a midrib. Sheaths between the branches, imbricated.

SYN. Tortula convoluta. *Swartz. Musc. Suec.* 41. *Schard. Spicil.* 66.

WHEN the *Flora Britannica* v. 3. was published, we were not aware of the above celebrated authors having mistaken this moss for *T. convoluta, t.* 2382; but having specimens from themselves, and having since gathered the same at Thorpe near Norwich, as well as received it from the Rev. Mr. Hemsted, through Mr. Turner, we clearly perceive the differences between the two. The tufts of this are much higher, the stems being divided into longer and more numerous branches. The leaves are more ovate and pointed, those of the sheath are more numerous, imbricated, not convoluted, and differ very little from those of the stem, both being furnished with a strong midrib. The lateral situation of the fruitstalk and its sheath, between the branches, common to both, distinguishes these from most British *Tortulæ*. The present is apparently the most common of the two, on sandy or gravelly banks, bearing fruit in March. Its fruitstalks are tawny. Capsule erect, brown, smooth, more ovate, with a shorter and thicker lid, than in *T. convoluta*.

2384

1657

Tortula stellata

TORTULA stellata.

Starry Furrowed Screw-moss.

CRYPTOGAMIA Musci.

GEN. CHAR. *Fringe* simple, of numerous capillary teeth, spirally and repeatedly twisted together.

SPEC. CHAR. Stem none. Leaves ovate, keeled, incurved. Capsule erect, ovate, somewhat cylindrical, furrowed. Lid oblique.

SYN. Tortula stellata. *Sm. Fl. Brit.* 1254.

Bryum stellatum. *Dicks. Crypt. fasc.* 2. 6; excluding the synonyms. *With* 812. *Hull.* 257.

WE feel ourselves particularly obliged to Mr. Dickson for enabling us to give a figure of a moss, concerning which there has been so much controversy and error as the present. He only has found it, about banks and by the sides of rivers in Scotland. We have struck out his synonyms, which Hedwig has justly observed to be confused. In fact they belong to three different species. But Hedwig has fallen into a much more unaccountable error, in asserting Mr. Dickson's plant to be not different from that in our *t.* 2382, *T. convoluta*, which the slightest inspection will refute.

Whether the roots of our *T. stellata* be annual or perennial is not known, but the plants are small, without stems, growing in patches Leaves radical, broad-ovate, concave, bluntish, entire, somewhat tapering at the base, of a shining green, strongly reticulated, and furnished with a stout red midrib, but no point. Fruitstalks solitary, central, reddish, half an inch high. Capsule ovate rather than cylindrical, singular in the whole genus, if we mistake not, for being strongly and regularly furrowed lengthwise, like that of a *Mnium*. The lid is oblique, as long as the capsule. Fringe light red-brown, nearly of the same length. Veil much longer.—No figure of this moss has yet been published.

2385.
1904

Caticium chlorellum.

Published by J. C. Lowe, London

LICHEN acicularis.

Minute Pin-headed Lichen.

CRYPTOGAMIA Algæ.

GEN. CHAR. Male scattered warts

Female, smooth shields or tubercles, in which the seeds are imbedded.

SPEC. CHAR. Crust leprous, powdery, pale greenish ash-coloured. Tubercles nearly globose, tawny, on shortish, cylindrical, upright stalks; disk small, brown, powdery.

SYN. Lichen acicularis. *Ach. Prodr.* 85.
Calicium aciculare. *Ach. Meth.* 97.

FOUND on the bark of old Scotch firs near Bury, by the Rev. G. R. Leathes, and sent under the above name, determined we believe by specimens from Acharius, but we are not possessed of any such. His account of the species, however, agrees sufficiently well, to leave little doubt on the subject. As to his synonyms, we have no means of forming an opinion, nor are they perhaps to be determined.

This is, as he says, "one of the least of its tribe, differing from *L. capitatus*, *t.* 1539, in having a paler-coloured crust, shorter stalks, and the head not exactly globose. The whole is besprinkled with tawny powder, except the base of the stalk, which in the adult *Lichen* is naked, turning brownish. Disk altogether imperceptible, like a little dot." Our specimens are perhaps further advanced than what Acharius saw; having the tawny powder partly rubbed off, and the disk more expanded, so as to show the brown seeds, which are all ingle and unconnected.

2.

3.

1.

LICHEN Sepincola.

Fence Lichen.

CRYPTOGAMIA Algæ.

GEN. CHAR. Male scattered warts.
Female, smooth shields or tubercles, in which the seeds are imbedded.

SPEC. CHAR. Membranaceous, smooth, glaucous-brown; paler and somewhat pitted beneath; segments flattish, ascending, sinuated, crenate, powdery at the edge. Shields nearly marginal, elevated, flattish, chesnut-coloured, with a thin notched border.

SYN. Lichen Sepincola. *Ehrh. Phytoph.* 90. *Ach. Prodr.* 169. *Hedw. Crypt. v.* 2. 8. *t.* 2. *Dicks. Crypt. fasc.* 3. 18. *With. v.* 4. 73. *Hull.* 300.
Plastisma Sepincola. *Hoffm. Pl. Lich. v.* 1. 71. *t.* 14. *f.* 1.
Cetraria Sepincola. *Ach. Meth.* 297

MR. DICKSON mentions this as growing on stones upon the Scottish mountains. We have seen no authentic British specimens, except a few, without fructification, shown us by Mr. Turner, growing on old posts and rails by the sea near Yarmouth. One of these is exhibited at *fig.* 1. That in fructification, *fig.* 2, on a branch of birch, came from Germany * It is usually found on old wooden fences, aged thorns, or other bushes, sometimes on stones, and is akin to *L. glaucus, t.* 1606, but not so thin, dilated, nor polished, neither is it so glaucous, but rather of a chesnut hue verging towards a lead-colour; the under side is paler, and whitish, not black, in the central part; the edges crenate, jagged and powdery. Shields copious when the plant attains its full growth, chiefly about the margin; at first sessile and concave, but soone levated, flattish, of a shining chesnut hue, with an uneven thin border.

* *Fig.* 8 was gathered in Scotland by Mr. W. Borrer.

Eriophorum
capitatum.

ERIOPHORUM capitatum.

Round-headed Cotton-grass.

TRIANDRIA Monogynia.

GEN. CHAR. *Glumes* chaffy, imbricated on all sides. *Cor.* none. *Seed* 1, invested with very long hairs.

SPEC. CHAR. Stem round to the summit, invested with a tubular sheath. Spike solitary, roundish. Glumes membranous.

SYN. Eriophorum capitatum. *Host. Gram. v.* 1. 30. *t.* 38. *Schard. Germ. v.* 1. 151.

E. Scheuchzeri. *Roth in Sims and Konig's Annals of Botany, v.* 1. 149.

Juncus alpinus, capitulo tomentoso majori. *Scheuchz. Agrost.* 304. *Prodr.* 27. *t.* 7.

DISCOVERED by Mr. Geo. Don, August 12, 1810, by the side of a rivulet on Ben Lawers, near the limits of perpetual snow. The plants were rooted in a sand-bank, and appeared to have been brought by alpine torrents from some still more inaccessible part of the mountain. His specimen agrees exactly with those sent by Professor Schrader and from Switzerland, and is doubtless Scheuchzer's plant.

This differs from *E. vaginatum*, *t.* 873, in having a more widely creeping root, which throws up here and there tufts of shorter and thicker leaves, channelled above, convex beneath, with a solitary stem, about a span high, remarkably straight, round to the very top, and much thicker, as well as shorter, than that of *E. vaginatum*, whose upper part is triangular, though the rest is round. The spike is round, not ovate or oblong. Sometimes the outer glume is broad, and looks like a sheath, but that is not the case in our only Scottish specimen.

This is unquestionably a most distinct species.

ROSA cinnamomea.

Cinnamon Rose.

ICOSANDRIA Polygynia.

GEN. CHAR. *Cal.* urn-shaped, fleshy, contracted at the orifice, terminating in 5 segments. *Petals* 5. *Seeds* numerous, bristly, fixed to the inside of the calyx.

SPEC. CHAR. Fruit globose, smooth as well as the flower-stalks. Stem with occasional, small, twin prickles, below the stipulas. Footstalks scarcely prickly. Leaflets oblong, finely downy; glaucous beneath.

SYN. Rosa cinnamomea. *Linn. Sp. Pl.* 703. *Ait. Hort. Kew. ed.* 2. *v.* 3. 259. *Retz. Prodr. Scand. ed.* 2. 120. *Ger. em.* 1268.

R. majalis. *Retz. Obs. fasc.* 3. 33. *Herm. Diss.* 8.

WE add this Rose to the catalogue of native English plants on the authority of a specimen, gathered in the wood in Aketon pasture near Pontefract, Yorkshire, some years since, by R. A. Salisbury, Esq. It flowers in May. The above synonyms are determined by authentic specimens. The fruit in our plate is taken from a Swedish one. If the flower be found defective, it must be attributed to the drawing being made from a dried specimen, which in this case was unavoidable. For the accuracy of the rest we can vouch.

This species is known by its slender, straggling, red-brown stems and branches; elliptic-oblong, sharply serrated leaflets, rather glaucous and downy beneath; downy footstalks, bearing here and there a small prickle; globular germen; and long, downy, rather leafy, calyx. A pair of small prickles usually grow on the older branches, just below where the leaves have been. A very double variety is common in gardens, but we have never met with the single kind. The reason of the name is not apparent. Gerarde says the leaves smell of cinnamon. The flowers surely do not.

Potentilla tridentata.

Mor. inv. pub. by J. Sowerby Lon.

POTENTILLA tridentata.

Trifid-leaved Cinquefoil.

ICOSANDRIA Polygynia.

GEN. CHAR. *Cal.* in 10 segments. *Petals* 5. *Seeds* roundish, naked, generally wrinkled, affixed to a small dry receptacle.

SPEC. CHAR. Leaves ternate, wedge-shaped; smooth above; hairy beneath; three-toothed at the summit.

SYN. Potentilla tridentata. *Soland in Ait. Hort. Kew. ed.* 1. *v.* 2. 216. *t.* 9. *ed.* 2. *v.* 3. 279. *Sm. Tr. of Linn. Soc. v.* 10. 343.

THIS wild specimen was gathered on a mountain called *Werron* in Angusshire by Mr. Geo Don, the only person who, to our knowledge, has observed the pesent species in Britain; it having heretofore been noticed in Newfoundlaud only; for the *P. retusa* of Retzius, figured in Fl. Dan. t. 799, having hairy leaves and yellow flowers, must be specifically distinct.

Our *tridentata*, justly reckoned by Mr. Don among the most beautiful of its genus, is perennial, and flowers in the spring. The roots are ceeping and rather woody, throwing up several annual stems, three or four inches high. The leaves grow chiefly about the lower part of each stem, on footstalks, ternate; the leaflets wedge-shaped, somewhat elliptical, entire except at the extremity, where they have three teeth; their upper surface is smooth, lower whitish and rather hairy. Stipulas fingered. Flowers few, at the end of the stem and branches, white, with purplish stamens, and hairy germens, stalks, and calyx.

2390.
786.

Ranunculus alpestris.

Mar. 1st Published by Jas. Sowerby London

RANUNCULUS alpestris.

Alpine White Crowfoot.

POLYANDRIA Polygynia.

GEN. CHAR. *Cal.* 5-leaved. *Petals* 5, with a honey-bearing pore on the inside of the claw of each. *Seeds* naked.

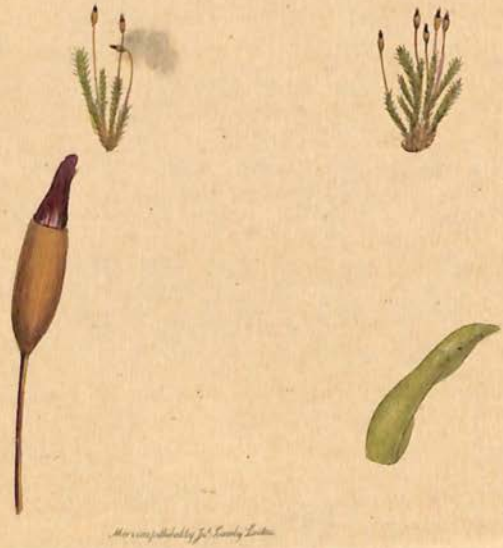
SPEC. CHAR. Leaves very smooth; radical ones somewhat heartshaped, obtuse, in three deep, lobed segments; stem-leaf lanceolate, entire. Stem mostly single-flowered.

SYN. Ranunculus alpestris. *Linn. Sp. Pl.* 778. *Sm. Tr. of Linn. Soc. v.* 10. 543. *Ait. Hort. Kew. ed.* 2 *v.* 3. 356. *Jacq. Austr. v.* 2. 7. *t.* 110.

R. montanus, flore minore, et flore majore. *Ger. em.* 964.

GATHERED by Mr. G. Don by the sides of little rills, and in other moist places, about two or three rocks on the mountain of Clova, Angusshire, flowering in the spring. Jacquin mentions it as extremely frequent on the highest summits of the Austrian alps, blooming after the melting of the snow. Mr. Don informs us that it rarely produces flowers where he observed it, and that the plant itself is not plentiful, being, moreover, so like in foliage to many of its kindred, as to be easily overlooked.

The roots are perennial, with long fibres. Whole herb very smooth. Stem from one to four or five inches high, almost always simple, naked, except one or two simple, linear-lanceolate, obtuse leaves. Radical leaves several, on longish, channelled stalks, deeply divided into three principal lobes, which are again deeply lobed and cut, elegantly veined. Flower almost always solitary, of a brilliant white. Calyx-leaves oval, smooth, bordered with white.—Haller speaks of this as one of the most acrid of its tribe, raising blisters on the skin; yet he adds that the alpine hunterr chew it by way of refreshment.



Mawe pubd by J.t Sowerby London

TORTULA barbata.

Bearded Lateral Screw-moss.

CRYPTOGAMIA Musci.

GEN. CHAR. *Fringe* simple, of numerous capillary teeth, spirally and repeatedly twisted together.

SPEC. CHAR. Stem branched from the base. Leaves elliptic-lanceolate, spreading, somewhat revolute. Fruitstalks lateral. Capsule ovate.

SYN. Tortula barbata. *Sm. Fl. Brit.* 1260.

Bryum barbatum. *Curt. Lond. fasc.* 4. *t.* 65. *With.* 829. *Hull.* 254. *Relh.* 426. *Abbot.* 237.

B. decipiens. *Abbot* 239, from the author.

B. unguiculatum et barbatum, tenuius et stellatum. *Dill. Musc.* 384. *t.* 48. *f.* 48.

COMMUNICATED by Mr. Dickson, under the above name, as not uncommon on heaths and walls in the winter and spring, about Charlton and elsewhere, according to Mr. Curtis's account; yet his figure does not so well agree with our plant as could be wished. We are certain however, from actual comparison, that ours is the plant of Dillenius. The Rev. H. Davies gave us the very surprising information of Mr. Hudson's having confounded this moss with *Tortula convoluta, t.* 2382; or possibly with our *nervosa, t.* 2383.

The stems are level-topped, branched from the base, from which part also the fruitstalks seem to originate; yet we think it extremely probable that they spring from what was the summit of the branch the season before. The leaves are recurved by drying, without awns; the topmost ones larger and stellated. Capsule erect, ovate, slender, smooth and shining. Fringe red, not very much twisted. The lid in Curtis is awl-shaped, oblique, nearly as long as the capsule.

2392.

May 1 1812 published by Jas Sowerby London.

TORTULA imbereis.

Deciduous Screw-moss.

CRYPTOGAMIA Musci.

GEN. CHAR. *Fringe* simple, of numerous capillary teeth, spirally and repeatedly twisted together.

SPEC. CHAR. Stem branched. Leaves awlshaped, spreading; ovate at their base. Stalks about the upper part of the branches. Capsule cylindrical, somewhat elliptical.

SYN. Tortula imberbis. *Sm. Fl. Brit.* 1261.

Bryum imberbe. *Linn. Mant.* 309. *Huds.* 481. *With.* 829. *Hull.* 254.

B. tenur, imberbe et pallidum, foliis crebrioribus. *Dill. Musc.* 382. *t.* 48. *f.* 46.

B. perangustis foliis et cauliculis, foliis crebrioribus. et circa extremitates magis congestis, capitulis erectus ad summitatem magis egredientibus. *Raii Syn.* 99.

FOR this also we are obliged to Mr. Dickson, and we have carefully compared his plant with that of Dillenius. It is found on dry banks, walls, and amongst grass, ripening fruit at the end of winter.

The stems are branched and level-topped. Leaves of a pale yellowish green, spreading, tapering and rather long, acute, channelled, single-ribbed; broad and somewhat ovate at the base; the edges entire, slightly revolute: the lower ones are smallest; uppermost crowded or stellated: all of them turn inward in drying. Fruitstalks about the upper parts of the branches, erect, purplish, an inch high. Capsule upright, cylindrical, in some degree elliptical or ovate, smooth, brown. Lid brown, but half the length of the capsule, a little oblique, of a thick awlshaped figure, by which we cannot but think this species sufficiently distinct from *fallax*, *t.* 2179, notwithstanding a passage in Mr. Turner's Muse Hib. 49, and Hedwig's misquotations. The fringe is light brown, very soon deciduous, whence it was supposed by some to be wanting.

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Published by J. Sowerby, London.

TORTULA aristata.

Short-pointed Screw-moss.

CRYPTOGAMIA Musci.

GEN. CHAR. *Fringe* simple, of numerous capillary teeth, spirally and repeatedly twisted together.

SPEC. CHAR. Stem branched, level-topped. Leaves oblong, obtuse, with a minute point; curved inward and twisted when dry. Capsule cylindrical.

SYN. Tortula aristata. *Sm. Fl. Brit.* 1261.

Bryum aristatum. *Dicks. Crypt. fasc.* 4. 12. *t.* 11. *f.* 7.

MR. DICKSON found this moss upon walls at Croydon, and the specimens in our plate are some of his own. Dr. W. Stokes, as we are told, observed the same at Cullen's wood bridge, near Dublin. It is perennial, bearing fruit in the spring.

The stems are about an inch high, with several level-topped branches. Leaves palish green, all nearly of equal size, ovate-oblong, some rather more elongated at the upper part than the rest; all entire, slightly revolute, keeled, obtuse, with a strong rib and a very small terminal point; by drying they become inflexed and twisted, not recurved. Fruitstalks terminal, crimson, not an inch high. Capsule erect, when quite ripe cylindrical and slender, smooth, pale brown, shining, thin and partly transparent; when young it is slightly ovate. The lid is awlshaped, curved, red, not quite so long as the capsule. Fringe falling off early, as in several other species to which this is most allied.

1479

BRYUM triquetrum.

Long-stalked Thread-moss.

CRYPTOGAMIA Musci.

GEN. CHAR. *Outer fringe* of 16 teeth, broadest at the base; *inner* a toothed membrane. *Flowers* terminal. *Capsule* ovate-oblong, smooth. *Veil* smooth.

SPEC. CHAR. Stem subdivided. Branches simple, erect. Leaves spreading in three rows, ovato-lanceolate, sharp-pointed, finely serrated. Capsule slender-pearshaped, oblique and incurved. Lid conical.

SYN. Bryum triquetrum. *Turn. Musc. Hib.* 115.
Mnium triquetrum. *Linn. Sp. Pl.* 1578, excluding the synonyms. *Ehrh. Phytoph.* 59.
Meesia longiseta. *Hewd. Sp. Musc.* 173. *Crypt. v.* 1. 56. *t.* 21, 22. *Swartz. Musc. Suec.* 43.

WE introduce this stately moss to the acquaintance of British botanists, on the authority of Mr. Turner, who mentions it as discovered by Dr. Scott, "about the borders of some lake in the north of Ireland." It bears fruit in July, and is perennial, growing always in a spongy peat soil. Having never seen Irish specimens, we are obliged to have recourse to Swedish and Swiss ones, in very fine preservation; by which we are enabled to correct certain inaccuracies in our predecessors.

The stems grow in tufts and are several inches high; not simple, but branched; the annual shoots indeed are usually simple and upright. Leaves in three rows, spreading, light green, nearly ovate, keeled, with a sharp point more or less elongated, a strong rib but no awn; the edges under a high magnifier prove to be finely serrated, by no means entire. The leaves of former seasons are permanent, blackened, intermixed with rusty-black down. Young flowers, encompassed with star-like leaves, terminate the branches. These seem destined to bear fruit in the following summer. The fruitstalks are terminal, solitary, uncommonly long, (even three or four inches,) somewhat wavy, red and very elegant. Capsule pale brown, smooth, pearshaped, a little oblique, bent where its cavity reaches the solid base, or spurious apophysis. Lid conical, short, acute. Outer fringe short and blunt, as described by Hedwig.

2395

1504.

Bryum roseum.

Published by J. & L. Lindley, [illegible]

BRYUM roseum.

Rosaceous Thyme Thread-moss.

GEN. CHAR. *Outer fringe* of 16 teeth, broadest at the base; *inner* a toothed membrame. *Flowers* terminal. *Capsule* ovate-oblong, smooth. *Veil* smooth.

SPEC. CHAR. Stem somewhat proliferous. Leaves crowded, stellate, ovate, acute, minutely dotted; finely serrated towards the summit. Lid conical.

SYN. Bryum roseum. *Schreb. Lips.* 84. *Swartz. Music. Suec.* 51. *Sm. Fl. Brit.* 1370. *Turn. Musc. Hib.* 132

B. serpyllifolium . *Huds.* 492.

B. proliferum. *Sibth.* 292.

B. stellare roseum majus, capsulis ovatis pendulis. *Dill. Musc.* 411. *t.* 52. *f* 77.

B. roseum majus, foliis oblongis. *Raii Syn.* 92.

Mnium roseum. *Hedw. Sp. Musc.* 194.

M. proliferum. *With.* 806. *Abbot.* 235.

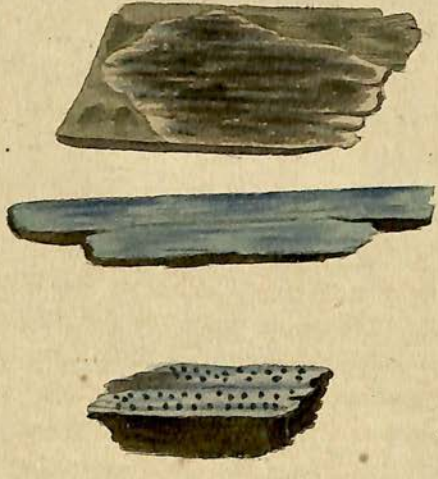
M. serpyllifolium . *Linn. Sp. Pl.* 1578. *Hull.* 250.

ALTHOUGH this species of *Bryum* may be occasionally met with in the moist parts of woods and heaths, the capsules are so exceedingly rare, that Dillenius appears to have procured them but once from his friend L. Brown, who found them at Christmas-time, near Bishop's-Castle. We are therefore happy to profit by Swedish specimens of Dr. Swartz.

The stems are simple, erect, an inch or two high, perennial, brown, bearing many small scattered scales, and at the top a starry tuft of numerous, large, broad, pointed, finely dotted leaves, whose upper part is finely serrated, and their entire base somewhat decurrent. The fruitstalks grow, solitary or in pairs, from the centre among the leaves, and are about two inches high. Capsule inclining, ovate, smooth, red brown. Lid, according to Dillenius, convex, but short. The top of each stem often throws up a vertical shoot, bearing leaves and fruit the next year. The barren stems described in Fl. Brit. prove to belong to a different plant.

2396

1980.



Spiloma microscapicum.

Not to be published by J. & H. Rees, London

SPILOMA microscopicum.

Microscopic Spiloma.

CRYPTOGAMIA Algæ.

GEN. CHAR. *Receptacles* shapeless, without a border, powdery, in an uninterrupted crust.

SPEC. CHAR. Crust spreading widely, very thin, membranous, greyish. Receptacles dot-like, very minute, black, lead-coloured when dry.

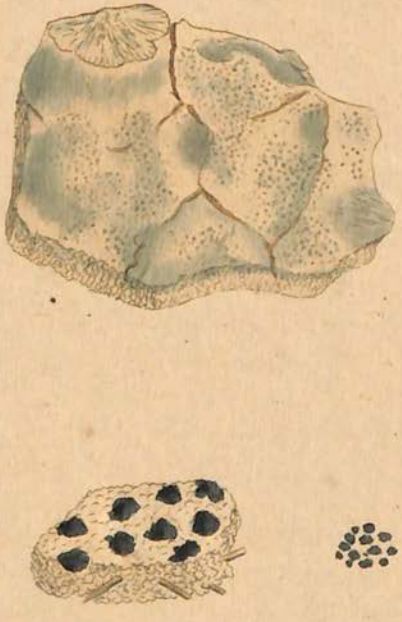
SYN. Spiloma microscopicum. *Turner and Borrer Lich. Brit. v.* 1. 30.

FOR this new *Spiloma* we are indebted to Mr. W. Borrer, who, as well as Mr. Turner, has most liberally allowed us to quote their unpublished *Lichenographia Britannica* as above.

This plant, "the most inconspicuous perhaps," as they observe, "of all the vegetables hitherto discovered," is very common on boarded buildings, and all timber exposed to the weather, to which it seems to give the blueish tinge after a while so universally observable. The crust is so extremely thin, that it seems merely to bleach the fibres of the wood, over which it spreads widely, exactly as the crust of *Lichen tartareus*, and others like it, over-run twigs of heath and shoots of mosses, on an infinitely larger scale. The dots of fructification are so excessively minute, as not to be discernible without a powerful microscope, yet they stain the fingers with their fine black powder. When dry they turn blueish, or grey. There are none of the jointed fibres, found in *S. melanopum*, *t.* 2358.

2397.

1981.



Spiloma murale

SPILOMA murale.

Wall Spiloma.

CRYPTOGAMIA Algæ.

GEN. CHAR. *Receptacles* shapeless, without a border, powdery, in an uninterrupted crust.

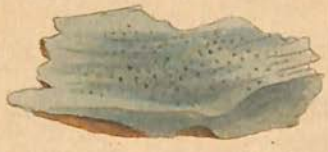
SPEC. CHAR. Crust obsolete, or white. Receptacles very minute, black, confluent, without bristles.

SYN. Spiloma murale. *Turn. & Borr. Lich. Brit. v.* 1. 31.

OBSERVED by Mr. W. Borrer, who sent it to us, upon the plastered walls of Cottages in Sussex, and by Mr. Turner on Burgh church, Suffolk. No doubt it may be found almost any where, by those who, with miscroscopic eyes, will take the pains to scrutinize any dirty mortar. But though as common perhaps, as it is to common observers indistinct and trifling, it holds a place in the chain of vegetable being, and the link it forms is accurately determined, since the genus to which this little species belongs is now clearly understood.

The crust is so thin, and so like the mortar, in whiteness, that if it exists, as we presume must be the case at some period or other, it is not discernible at an advanced stage of the fructification. The receptacles form very minute black irregular dots, with a greyish tinge, like a stain upon the mortar, and consist of globular grains, without any hairs or bristle intermixed. We therefore, taught by our learned friends above cited, exclude the latter circumstance from our generic character.

2390
1982



Spiloma dispersum

Published by Jas. Sowerby

SPILOMA dispersum.

Scattered Greenish Spiloma.

CRYPTOGAMIA Algæ.

GEN. CHAR. *Receptacles* shapeless, without a border, powdery, in an uninterrupted crust.

SPEC. CHAR. Crust filmy, very thin, greenish grey. Receptacles mostly dispersed, hemispherical, sooty; internally yellowish green.

SYN. Spiloma dispersum. *Turn. and Borr. Lich. Brit. v.* 1. 32.

NOT unfrequent on old rails. It is a very distinct and unequivocal species. The crust looks only like a greenish or olive stain. The receptacles are more or less widely scattered, rarely confluent, smaller than poppy-seed, hemispherical, rough, of a sooty or brownish black; internally their substance appears solid, and of a light yellowish, or olive, green. The latter part commonly becomes readily obvious, as the outside is easily rubbed off; in which state each receptacle looks like a little black ring round a greenish spot, and might hastily be mistaken for the shield of a Lichen.

2399

1987

Spiloma decolorans.

SPILOMA decolorans.

Staining Spiloma.

CRYPTOGAMIA Algæ.

GEN. CHAR. *Receptacles* shapeless, without a border, powdery, in an uninterrupted crust.

SPEC. CHAR. Crust spreading widely, very thin, for the most part membranous, greyish white; yellowish green when rubbed. Receptacle minute, flat, confluent, purplish grey.

SYN. Spiloma decolorans. *Turn and Borr. Lich. Brit. v.* 1. 39.

COMMUNICATED upon the rugged bark of an old oak, by Mr. W. Borrer. It is said to be common in that situation, as well as on boarded buildings, and on pales.

The crust is very thin, widely extended without interruption, even, rarely rugged or cracked, membranous, scarcely, at all tartareous; externally of a dirty white or grey; green within; which latter hue, with a tinge of yellow, it permanently assumes on being rubbed with any hard body. The fructification when young appears in the form of irregular, minute, whitish, flat, powdery warts, which soon become confluent, covering the whole plant, and giving it a faint purplish hue as they advance in age.

2490
199 2

Variolaria griseo-virens.

VARIOLARIA griseo-virens.

Greyish-green Variolaria.

CRYPTOGAMIA Algæ.

GEN. CHAR. *Receptacles* cup-shaped, with a torn border from the crust, powdery, with a fertile disk beneath.

SPEC. CHAR. Crust elliptical, thin, slightly tartareous, rugged, grey, scarcely limited. Receptacles roundish, with a narrow border. Powder greenish.

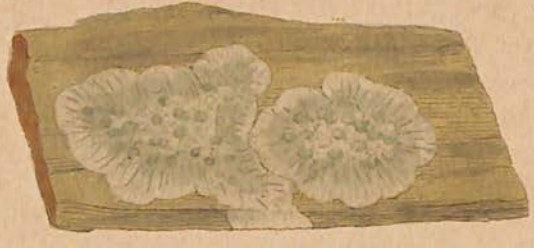
SYN. Variolaria griseo-virens. *Turn. and Borr. Lich. Brit. v.* 1. 54.

ON the smooth cuticle of the bark of birch and cherry trees, given us by Mr. W. Borrer, from Stratton-strawless heath, Norfolk. The grey brownish crust looks like a dirty stain, or mass of decayed *Lepraria;* but on examination proves to be of a continued, rugged, though thin substance, and composes oblong transverse patches, an inch or two in length, and half an inch in breadth. The colour is the same, whether the plant be moist or dry. The little pale-green fructification, either scattered or crowded, readily discovers this species when once known. Each receptacle is roundish, with a narrow border, mostly concealed by the protruding powder, which turns greener or yellowish with moisture.

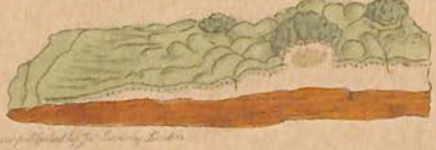
We can no longer decline adopting this genus, which our friends above cited have well illustrated, and to which they refer our *Spiloma Vitiligo, t.* 2075, of whose "*margo spurius*" we could not but be aware, but we thought there were hairs intermixed with its powder. The propriety of establishing *Variolaria* is hinted in v. 24. 1713, though the nature of the powder it bears is still a mystery. See t. 1713, 1714, 2008, 2061, 2401, for others of this genus.

2401

1997.



Variolaria aspergilla.



VARIOLARIA aspergilla.

Sprinkled Variolaria.

CRYPTOGAMIA Algæ.

GEN. CHAR. *Receptacles* cup-shaped, with a torn border from the crust, powdery, with a fertile disk beneath.

SPEC. CHAR. Crust orbicular, tartareous, thickish, dull white, wrinkled, with a smooth white polished edge Receptacles scattered, elevated, hemispherical, with an obsolete border. Powder very white.

SYN. Variolaria aspergilla. *Ach. Meth.* 13. *Turn. and Borr. Lich. Brit. v.* 1. 67.

Lichen aspergillus. *Ach. Prodr.* 28; excluding the reference to Persoon.

THIS, received from Mr. W. Borrer, who finds it in Sussex, more commonly on rails than on trees, agrees less precisely than could be wished with a named specimen from Prof. Acharius, which is whiter, and answers to the description in his *Methodus*, of the crust being *scarce manifestly rimose*; whereas ours is wrinkled, and when dry evi ently full of cracks. Mr. Turner and Mr. Borrer nevertheless have decided it, by their specimens from that author, to be right. We are not without doubts of his having confounded different plants.

The edge of the present is thin, polished, of an uniform white; the rest greyish or blueish white, a little thickened and tartareous, wrinkled and cracked. Receptacles neither numerous nor crowded, but scattered, convex and prominent; their border minute and soon obliterated; their internal disk pale flesh-coloured, concealed by the copious white powder, which forms a dense mass, and when rubbed turns greenish. The colour of this species is unchanged by moisture. Its taste is not bitter as in *V. faginea, t.* 1713.

2402
74.

Eriophorum gracile.

ERIOPHORUM gracile.

Slender Mountain Cotton grass.

TRIANDRIA Monoggnia.

GEN. CHAR. *Glumes* chaffy, imbricated on all sides. *Cor.* none. *Seed* 1, invested with very long hairs.

SPEC. CHAR. Stem round; compressed towards the top. Leaves triangular, channelled in the upper part. Spikes several, stalked; longer than the bractea. Seeds linear.

SYN. Eriophorum gracile. *Roth in Sims and Kon. Ann. of Bot. v.* 1. 850.

FOUND in boggy places in the micaceous soil of Ben Lawers, by Mr. G. Don, who determined it to be the above plant of Dr. Roth; and though we have no further means of judging than by the work here quoted, we think there can be little doubt.

Every part is much smaller and more delicate than the common lowland *E. angustifolium*, t. 564. The leaves are triangular, and scarcely channelled except towards the point. The compression in the upper part of the stem, described by Dr. Roth, our dried specimens are not in a state to exhibit, neither are they forward enough to determine whether the seed be, as he says, linear. But the short membranous floral leaf, so different from those in t. 564, agrees, with his description, and the blueish colour of the flowering spikes resembles that of *E. vaginatum*, t. 873. The new *Eriophorum* flowers late in July, and has long, very slender, perrenial roots.

2403.
909.

Cochlearia Grænlandica.

Published by Jas. Sowerby, London

COCHLEARIA groenlandica

Greenland Scurvy-grass.

TETRADYNAMIA Siliculosa.

GEN. CHAR. *Pouch* turgid, rugged; valves gibbous, obtuse. *Calyx* spreading, concave.

SPEC. CHAR. Leaves kidney-shaped, fleshy, entire. Pouch globose.

SYN. Cochlearia groenlandica. *Linn. Sp. Pl.* 904. *Sm. Tr. of Linn. Soc. v.* 10. 344.

C. minima, erecta et repens, insulæ Aalholmianæ. *Willius in Bartholin. Act. Hafniæ, v.* 3. 143. *f.* 144.

MUCH doubt has existed among the students of British plants respecting *Cochlearia groenlandica*, for which, what we judge to be a variety of *officinalis*, *t.* 551, has often been taken Whether the present may possibly be another variety of that common species we dare not absolutely determine, but it seems very different, and we can positively assert it to be the Linnæan *groenlandica*.

This was found on the mountains of Clova, Angusshire, and at Loch-ne-gare, in August 1807, by Mr. Geo. Don. The root consists of numerous fibres, and is said to be annual. Radical leaves on long stalks, very fleshy, convex beneath, roundish-kidney-shaped, entire: those of the stem more oblong nearly sessile, sometimes with a tooth at each side. Flowers large and numerous, white tinged with purple: one cluster sessile at the root, the rest terminating the branches. Pouch globose, with a short style, as in *C. officinalis*.

Carex ustulata.

CAREX ustulata.

Scorched alpine Carex.

MONOECIA Triandria.

GEN. CHAR. Male, *Catkin* imbricated. *Cal.* of 1 scale. *Cor.* none. Female, *Catkin* imbricated. *Cal.* of 1 scale. *Cor.* none. *Stigmas* 2 or 3. *Seed* clothed with a swelling tunic.

SPEC. CHAR. Sheaths very short. Female spikes ovate, pendulous. Fruit elliptical, compressed, beaked, with sharp and roughish edges. Root fibrous.

SYN. Carex ustulata. *Willd. Sp. Pl. v.* 4. 293. *Wahlenb. in Sims & Kon. Ann. of Bot. v.* 2. 130.
C. atro-fusca. *Schkuhr. Car.* 106. *t.* Y. *n.* 82.

GATHERED in watery places in a micaceous soil on the mountain of Ben Lawers, by Mr. Geo. Don, the only person, who, to our knowledge, has met with this species in Britain. We presume there can be no doubt respecting its synonyms.

The root is perennial, strong and tufted, scarcely creeping, with very long and numerous yellowish fibres. Stem almost naked, triangular, smooth, hardly a span high. Leaves short, erect, striated, smooth, except at the edges near the point where there is a slight roughness. Spikes dark-coloured, looking as if scorched or burnt, all of a short, tumid figure; the lowet bractea only slightly sheathing. The two female spikes are pendulous, the male one erect. We find the edges of the fruit roughish upwards, the beak is short and cloven. Stigmas three, long, dark-coloured. This species ranges near *limosa*, *t.* 2043, and *atrata*, *t.* 2044.

SAXIFRAGA elongella.

Long-stalked Saxifrage.

DECANDRIA Digynia.

GEN. CHAR. *Cal.* 5-cleft. *Petals* 5. *Caps.* with 2 beaks, 1 cell, and many *seeds.*

SPEC. CHAR. Leaves in three or five bristle-pointed segments; their base elongated: the uppermost linear and undivided. Flowerstalks very long and naked.

SYN. Saxifraga elongella. *Donn. Cant. ed.* 5. 107. *Sm. Tr. of Linn. Soc. v.* 10. 340.

OUR specimens from Mr. G. Don were gathered on a rock by a river called Lintrathen, a mile and half north of Airly castle, Angusshire. The stems creep considerably, and are smooth, slightly leafy, throwing out numerous short, much more leafy, branches. The lower leaves on each branch, and one or two below the flowerstalk, are linear and undivided; the rest, from a long narrow base, divide suddenly into three oblong, acute, nearly equal lobes, the two outermost of which are sometimes cloven; all the leaves are more or less fringed with soft hairs, and their points tipped with a small bristle. What chiefly characterize this species are the solitary, simple, terminal, naked flowerstalks, very slightly glandular, each about two inches tall, and bearing a very large white upright flower, whose germen is inferior, calyx-teeth ovate, and petals obovate, entire, with three slender ribs, separating a little above the base, the lateral ones incurved to the midrib before they reach the top. In cultivated specimens there are sometimes one or two lateral 2-flowered stalks, but this is not natural to the plant. It blossoms early in summer.

May 1 1812 published by Jas Sowerby London

HYPNUM adnatum.

Depressed Feather-moss.

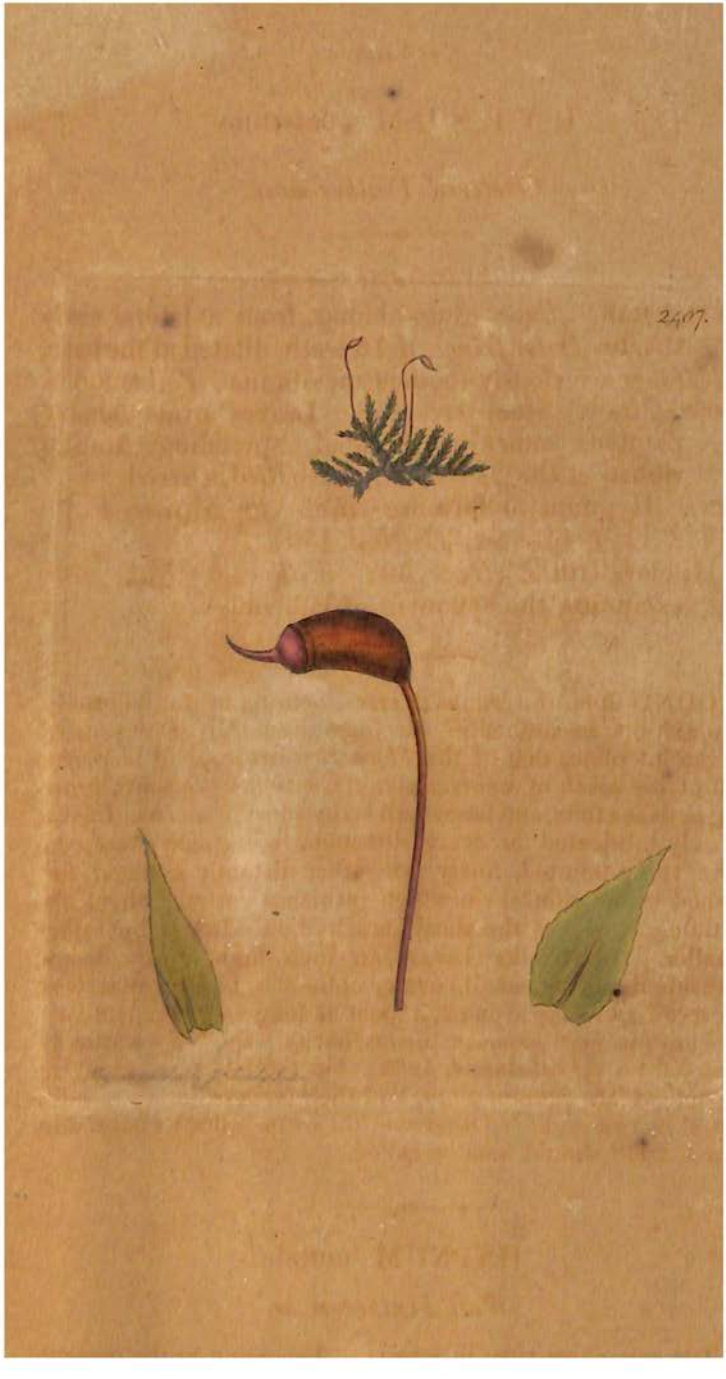
CRYPTOGAMIA Musci.

GEN. CHAR. *Caps.* ovate-oblong, from a lateral scaly sheath. *Outer fringe* of 16 teeth, dilated at the base: *inner* a variously-toothed membrane. *Veil* smooth.

SPEC. CHAR. Stem creeping. Branches nearly simple. Leaves ovate, sharp-pointed, entire, concave. Lid conical.

SYN. Hypnum adnatum. *Hedw. Sp. Musc.* 248. *t.* 64. *f.* 5--10. *Sm. Fl. Brit.*, 1303. *Turn. Musc. Hib.* 165.

ONE of Mr. Turner's original specimens, gathered at Rathmines, near Dublin, by Dr. Whitley Stokes, is drawn in our plate. This moss has short stems, creeping on the ground, and throwing up several, nearly erect, short, and generally simple branches, entirely clothed with leaves imbricatud every way, and but slightly spreading. The colour of the leaves is a tawny or reddish green, with some gloss; they are small, ovate, sharp-pointed, concave and entire. They have been hitherto thought to have no nerve, and Hedwig has so figured them; but Mr. J. D. Sowerby has found a strong though short nerve at the base, both in the leaves of the stem, and those of the sheath, which last differ from the rest only in being narrower. The fruitstalks are an inch high, deep red, smooth. Capsule drooping, or nearly horizontal, ovate, smooth, of a rusty brown, with a slightly dilated orifice. Lid conical, short, oblique. The entire leaves and short lid still keep this distinct enough from *H. confertum*, see next plate, notwithstanding the rib or nerve.



HYPNUM confertum.

Clustered Feather-moss.

CRYPTOGAMIA Musci.

GEN. CHAR. *Caps.* ovate-oblong, from a lateral scaly sheath. *Outer fringe* of 16 teeth, dilated at the base: *inner* a variously-toothed membrane. *Veil* smooth.

SPEC. CHAR. Stem creeping Leaves ovate, sharp-pointed, somewhat serrated, spreading, single-ribbed at the base. Lid awlshaped, curved.

SYN. Hypnum confertum. *Dicks Crypt. fasc.* 4. 17. *t.* 11. *f.* 14. *Sm. Fl. Brit.* 1304.

H. clavellatum. *Huds.* 508. *With* 866. *Hull.* 274; excluding the synonym of Dillenius

FOUND upon the trunks of trees, bearing fruit in February. We exhibit an authentic specimen from Mr. Dickson, by which his plant, that of the *Flora Britannica*, will be placed out of the reach of uncertainty. The stems are short, growing in dense tufts, and beset with many short branches. Leaves loosely imbricated in every direction, light green ovate concave, sharp-pointed, finely but rather distantly serrated, furnished with a central rib which varnishes entirely about the middle. Scales of the sheath much like the leaves, but rather smaller. Fruitstalks hardly an inch high, tawny or red Capsule drooping, small, ovate, oblique. Lid convex, with a corved awl-shaped beak, almost as long as the capsule.

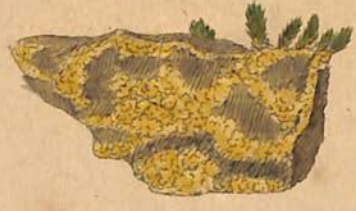
There has been some suspicion that this species was not distinct from *serrulatum t.* 1262; but the latter has more the aspect of an aquatic moss, and the leaves certainly are disposed in two ranks. Otherwise they are indeed nealy akin. Our *t.* 1038 should now be called.

HYPNUM murale.

Wall Feather-moss.

The synonyms must be erased, as belonging to the present; others to replace them may be found in *Fl Brit.* 1304, 1305

2408
1974



Lepraria ochracea

May 1st 1812 published by Jas Sowerby London

LEPRARIA ochracea.

Ochrey Lepraria.

CRYPTOGAMIA Algæ.

GEN. CHAR. *Seeds* in a powdery substance, loosely clothing a membranous or fibrous crust.

SPEC. CHAR. Crust not discernible. Fructification of ochrey yellow, collected into thin scattered patches.

SYN. Lepraria ochracea. *Turn. & Borr. Lich. Brit. v.* 1. 8.

THE trunks of old trees at Hurst-Pierpoint and Poynings, Sussex, produced the specimens, for which we are indebted to Mr. W. Borrer. The same is said to be found about Yarmouth and Halesworth, generally on *Hypnum sericeum*; see *t.* 1445.

We have certainly often seen this production, and have thought it the early state of *Lichen candelarius, t.* 1794. That our work may not, however, be incomplete, as to any species described by authentic writers, we thankfully profit of the permission here allowed us, of quoting Messrs. Turner and Borrer's unpublished sheets. They describe this species as destitute of a frond or crust, which confirms our suspicion, that what they term *propagula*, and we above have called fructification, may be the incipient frond of some *Lichen*. These are scattered or clustered, in a most irregular manner, in the form of finely granulated masses of a pale, dull, ochraceous yellow, often greenish, and rather brighter when wet than dry. If, however, their shape is observed to be, for any time, permanent, the reality of the species, as a *Lepraria*, cannot be denied.

LEPRARIA nigra.

Black Lepraria.

CRYPTOGAMIA Algæ.

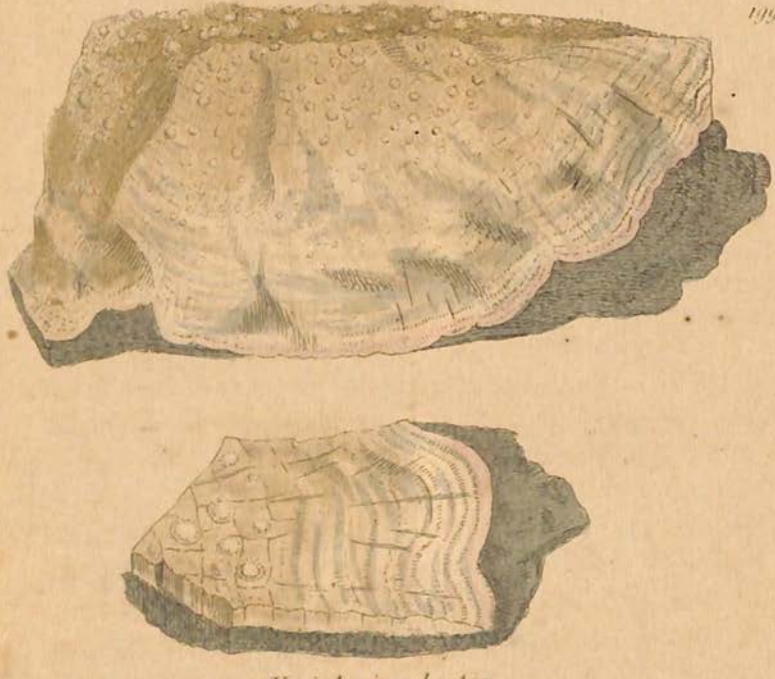
GEN. CHAR. *Seeds* in a powdery substance, loosely clothing a membranous or fibrous crust.

SPEC. CHAR. Crust filmy, greyish. Fructification black, extremely minute, in a thin, even, powdery layer.

SYN. Lepraria nigra *Turn. & Borr. Lich. Brit v.* 1. 21.

ABOUT this there can be no uncertainty. It is only remarkable that so common a production should not before have had its nature investigated or defined. The squared tops of oaken gate-posts, in particular, are generally black, as if sooty or inky, with this *Lepraria*. Mr. Borrer has observed it to have a grey filmy basis or crust, which is to be detected in its earliest stage only, but serves to prove its nature. Fructification in extremely minute round black grains, which stain the finger, though less readily than some of the *Spilomata*, and cover the whole surface of the crust in a thin continuous layer. We readily assent to the supposition of the writer of the *Lichenographia Britannica*, that many botanists may have taken this for *Byssus antiquitatis*, because we have, for our part, without much consideration, supposed it such; really not knowing, any more than our fellow labourers in this mine of obscurity, what that *Byssus* properly is. In several such cases the ideas of the first writers on these plants have been too vague to allow us to determine what they meant, without the assistance of a specimen.

2410
1998.



. *Variolaria lactea*

VARIOLARIA lactea.

Milky-white Variolaria.

CRYPTOGAMIA Algæ.

GEN. CHAR. *Receptacles* cup-shaped, with a torn border from the crust, powdery, with a fertile disk beneath.

SPEC. CHAR. Crust orbicular, tartareous, thick, white, cracked; thin, polished, zoned and flesh-coloured in the circumference. Receptacles orbicular, very white, with an elevated margin when young.

SYN. Variolaria lactea. *Pers. in Ust. Ann. fasc.* 7. 24. *Ach. Meth.* 14. *t.* 1. *f.* 6. *Turn & Borr. Lich. Brit. v.* 1. 69.

Lichen lacteus. *Linn. Mant.* 132. *Huds.* 526. *With. v.* 4. 5. *Hull.* 285 *Wulf. in Jacq. Coll. v.* 3. 107. *t.* 4. *Westr. fasc.* 25. *t.* 3?

THE Rev. Mr. Hariman sent us beautiful specimens of this, on whinstone, from the north. Its crust spreads widely and circularly, without interruption, being tartareous, cream-coloured, finely granulated, tuberculated, cracked and opaque over the greater part of its surface. The marginal region, if we may so speak, is much thinner, polished almost like satin, marked with numerous concentric lines or plaits, and tinged at the edge with a delicate flesh-colour. This part is better described by Wulfen than any other writer. Acharius seems not well to have known it. The fructification when young is small, not unlike, the shields of a *Lichen*, having a thickish elevated border, though only an uneven disk. The latter in process of time becomes very white and powdery. The internal disk Mr. Taylor says is pale brown, but not easily discoverable. Notwithstanding the doubts of Acharius reported in the *Lich. Brit.* we cannot have any scruples as to Wulfen's synonym.—Dr. Westring's plate is much less like our plant; indeed it seems scarcely intended for it, though drawn by Acharius, from whom we have a correct specimen.

Variolaria cinerea.

May 1st 1796 published by Jas Sowerby London

VARIOLARIA cinerea.

Ash-coloured Variolaria.

CRYPTOGAMIA Algæ.

GEN. CHAR. *Receptacles* cup-shaped, with a torn border irom the crust, powdery, with a fertile disk beneath.

SPEC. CHAR. Crust orbicular, tartareous, thin, ash-coloured, cracked; its circumference indeterminate. Receptacles orbicular, very small, white, with an elevated margin, and a flesh-coloured disk.

FOR this also we are obliged to the Rev. Mr. Harriman, who found it on whinstone in the county of Durham. It has been thought a variety of the last, (*V. lactea*,) but we presume to think it as distinct as any other of the genus; differing from *lactea* in the grey ashy colour, and great tenuity, of the crust; but especially in the margin being indeterminate, extending itself in dispersed spreading patches, and by no means limited by a thin shining zoned border, which is essential to the former. The fructification is copious though small, in minute white prominent dots. These prove, under a magnifier, to be orbicular receptacles, with an elevated entire border of the substance of the crust, and a very distinct, solid, flesh-coloured disk, covered by a dense layer of very white powder, which easily rubs off, and the disk becomes visible by means of its reddish hue.

This species is not mentioned in the *Lichenographia Britannica*, though perhaps alluded to under *V. lactea*, *arenaria*, p. 69.

2412
1931

Verrucaria punctiformis

LICHEN punctiformis.

Dot-shaped Tubercled Lichen.

CRYPTOGAMIA Algæ.

GEN. CHAR. Male, scattered warts.
Female, smooth shields or tubercles, in which the seeds are imbedded.

SPEC. CHAR. Crust determined, very thin, smooth, rusty-brown. Tubercles minute, black, hemispherical, umbilicated.

SYN. Lichen punctiformis. *Ach. Prodr.* 18.
L. myacoproides. *Ehrh. Crypt.* 264.
Verrucaria punctiformis. *Pers. in Ust. Ann. fasc.* 11. 19. *Ach. Meth.* 119.

NOTICED commonly on the smooth bark of ash-trees, by Mr. W. Borrer. His specimens agree with those from Acharius and Ehrhart. Were it not for the decision of such consummate cryptogamists, we should, even by tracing the various appearances of their own specimens, judge this a variety of *N. analeptus, t.* 1848, from which it differs but slightly in the rather more red or rusty hue of the very thin crust. The tubercles indeed are still more minute than in that species, and so much umbilicated as to be occasionally almost cup-shaped. A comparison of the two plates will show the difference of their forms. In a young state, those of the present *Lichen* are, of course, but slightly excavated, but they are then too small to be confounded with the other.

2413.

Echinophora spinosa

ECHINOPHORA spinosa.

Prickly Sampire.

PENTANDRIA Digynia.

GEN. CHAR. *Partial Involucrum* turbinate, of one leaf, in six segments. Marginal *flowers* radiant, male, stalked; central one female. *Seeds* imbedded in the partial involucrum.

SPEC. CHAR. Leaflets awlshaped, spinous, three-cleft or undivided, entire.

SYN. Echinophora spinosa. *Linn. Sp. Pl.* 344. *Sm. Fl. Brit.* 293. *Rees's Cyclop. v.* 12. *Huds.* 112. *With.* 285 *Hull. ed.* 2. 78. *Cavan. Ic. t.* 127.
E. maritima spinosa. *Dill. in Raii Syn.* 220.
Crithmum spinosum. *Ger. em.* 533. *Raii. Syn. ed.* 2. 114.

OUR plan requires that every plant admitted into the *Flora Britannica* should find a place in this work. The present is one of those of which we have been obliged to recur to an exotic specimen; for though there are numerous authorities for its having been formerly found, on various and remote parts of the English sea coast, nobody can meet with it now. Yet as the *Ligusticum cornubiense* was, for a longer space of time, supposed to be lost, we do not despair of *Echinophora*. Its aspect and characters are too distinct to admit a possibility of any other plant having been mistaken for this. It flowers in July.

The root is perennial, long, tapering, fleshy, said to have the taste of a parsnep, with some saltness, and a stimulating quality. Stem bushy, furrowed, excessively branched, and so beset with spinous pinnate opposite leaves, as to be nearly inaccessible. Umbels terminal, with lanceolate, spinous involucral leaves, both general and partial. Flowers white, occasionally with a reddish tinge. Petals of the marginal ones unequal, with an inflexed fringed tip. Calyx spinous. Rudiments of the seeds two, one of which only comes to perfection, lodged in the fleshy centre of the partial umbel.

2414.
759.
Helianthemum
ledifolium

CISTUS ledifolius.

Ledum-leaved Cistus.

POLYANDRIA Monogynia.

GEN. CHAR. *Cal.* of 5 leaves, 2 of which are smaller than the rest. *Petals* 5. *Caps.* superior, angular, with 3 valves and many *seeds*.

SPEC. CHAR. Herbaceous, downy, with stipulas. Leaves lanceolate. Flowerstalks erect, shorter than the calyx.

SYN. Cistus ledifolius. *Linn. Sp. Pl.* 742. *Sm. Fl. Brit* 574. *Hull. ed.* 2. 159.

C. salicifolius. *Huds.* 233. *With.* 491.

C. annus, et C. annus longifolius Lobelii. *Ger. em.* 1280.

BRENT downs Somersetshire, or the sandy fields in that neighbourhood, commanding the Bristol channel, are the only situations where this *Cistus* is recorded to have been found. Mr. Dickson and the late Mr. Lightfoot communicated to us specimens, raised from seed gathered by themselves at that place, which determined the species to be *ledifolious* of Linnæus; not *salicifolius*, for which latter it was taken by its discover Mr. Hudson.

The root is annual, not much branched. Stem nearly erect, simple, or branched at the bottom, round, hairy, leafy. Leaves opposite in the lower part of the stem; alternate in the upper; nearly sessille, lanceolate, obtuse, entire, contracted at the base, clothed with soft short hairs. Stipulas in pairs at the base of each footstalk, lanceolate, acute, not half the length of the leaf. Flowers opposite to each of the alternate leaves, solitary, on short, firm, upright stalks. Calyx-leaves pointed, hairy, somewhat membranous, with strong ribs. Petals pale yellow, obovate, smaller than the calyx, very fugacious, and sometimes wanting. Capsule large, triangular, polished, crowned with the short permanent style and thick stigma, of one cell, with many seeds. The flowering time is June and July.

2415.
809.
Mentha acutifolia.

MENTHA acutifolia.

Fragrant Sharp-leaved Mint.

DIDYNAMIA Gymnospermia.

GEN. CHAR. *Cal.* 5-cleft. *Cor.* nearly regular, 4-cleft; its broadest segment notched. *Stamina* erect, distant.

SPEC. CHAR. Flowers whorled. Leaves ovato-lanceolate, tapering at each end. Calyx hairy all over. Hairs of the flowerstalks spreading.

SYN. Mentha acutifolia. *Sm. Tr. of Linn. Soc. v.* 5. 203. *Fl. Brit.* 619. *Hull. ed.* 2. 173.

M. verticillata. *Mill. Dict. ed.* 8. *n.* 17.

HAVING in vain explored the banks of the Medway for recent specimens of this Mint, we are obliged to make the best representation we can of it from one of Rand's original ones, preserved, with his hand-writing annexed, in Miller's herbarium, and given us by Sir J. Banks. This is the very identical specimen, described in all the places indicated above. It may very possibly be a variety of *M. hirsuta*, *t.* 447 and 448, but several circumstances seem to make it distinct. The leaves are narrower, more pointed or tapering at each end, and more unequally serrated. On this last mark indeed experience teaches us to lay little stress, any more than on the sweet smell, like frankincense thyme, which the specimen still retains. The hairs clothing the flowerstalks are horizontal or slightly recurved, not deflexed close to the stalk; what inclination they have is, however, that way, so this may be merely a difference in degree of depression. The whorls are all quite sessile. Corolla hairy in the throat, in which the stamens are included. The body of the calyx is clothed entirely with ascending hairs, especially at the base, which essentially distinguishes this plant from *rubra*, *t.* 1413.

2416.
1148.

ERIGERON uniflorum.

Pale-rayed Mountain Flea-bane.

SYNGENESIA Polygamia-superflua.

GEN. CHAR. *Recept.* naked. *Down* simple. *Florets* of the radius linear, very narrow, numerous. *Cal.* imbricated.

SPEC. CHAR. Stems mostly single-flowered. Calyx hairy. Florets of the radius erect, somewhat tubular.

SYN. Erigeron uniflorum. *Linn. Sp. Pl.* 1211. *Fl. Lapp. ed.* 2. 250. *t.* 9. *f.* 3. *Sm. Tr. of Linn. Soc. v.* 10. 346.

GATHERED on Ben Lawers, as well as on rocks by the river Almond, near Lindoch, seven miles from Perth, by Mr. G. Don, who justly distinguished this species from *E. alpinum*, *t.* 464, with which even Linnæus at one time confounded it. In root, habit and size these two plants nearly agree, as well as in time of flowering. The stems of both are usually simple and single-flowered, occasionally many-flowered. But the florets of the radius in *uniflorum* are more slender and always upright, of a darker purple about their middle, though more or less white at the tip; those of the disk are tipped with a very dark purple or brown. The calyx is very hairy externally; its inner scales purple, fringed. The disk very rarely varies to a light yellow.

2417.

SPLACHNUM urceolatum.

Elliptical Gland-moss.

CRYPTOGAMIA Musci.

GEN. CHAR. *Caps.* cylindrical, placed on a fleshy *receptacle*. *Fringe* simple, of 16 teeth, standing in pairs.

SPEC. CHAR. Receptacle obovate, greenish-brown. Leaves elliptical, concave, entire, taper-pointed.

SYN. Splachnum urceolatum. *Hedw. Sp. Musc.* 52. *Crypt. v.* 2. 39. *t.* 13. *Sm. Fl. Brit.* 1170. *Dicks. Crypt. fasc.* 2. 2. *With.* 793. *Hull.* 246.

S. ampullaceum. *Fl. Dan. t.* 192; bad.

S. bryoides. *Zoeg. Fl. Island.* 12. *Von Troil Isl.* 119.

FOUND on the Scottish mountain of Ben High, by Mr. Dickson, to whom we are indebted for a specimen, which we have compared with original ones in the Linnæan herbarium, gathered by Zoega in Iceland.

The stem compose dense tufts, about an inch high, and are either simple or divided. Leaves numerous, imbricated, darkish green, elliptical, obtuse, concave, entire, with one rib, and a long taper, very slender green point, along which the rib is continued, but there is no positive hair-like appendage. Fruitstalk various in length, stout, red or tawny, quite straight. Receptacle obovate, tolerably smooth, at first green, then brown. Capsule brown, narrower than the receptacle, and but about half as long, finally contracted in the middle. Lid hemispherical. Fringe yellowish, turning brown in decay.

May 1 1818 published by Jas Sowerby London

DICRANUM Celsii.

Celsian Fork-moss.

CRYPTOGAMIA Musci.

GEN. CHAR. *Caps.* oblong. *Fringe* 16 flat, cloven teeth, a little inflexed.

SPEC. CHAR. Stems very short, perfectly simple. Leaves lanceolate, pointed, single-ribbed, entire. Capsule furrowed, strumous internally at the base. Lid conical.

SYN. Dicranum Celsii. *Hedw. Sp. Musc.* 149. *t.* 33. *f.* 1—4. *Sm. Fl. Brit.* 1221. *Turn. Musc. Hib* 71.

Byrum Celsii. *Linn. Sp. Pl.* 1585. *Dicks. Crypt. fasc.* 3. 7. *With.* 832. *Hull.* 263.

B. trichodes acaulon minimum, setis et capsulis oblongis. *Dill. Musc.* 388. *t.* 49. *f.* 54.

WE have received from Mr. Dickson the specimen in our plate, gathered by himself on rocks in the Highlands of Scotland, and we have, in his presence, compared it at Oxford with those of Dillenius, from whom Linnæus adopted the species; for we do not find that he obtained any specimens from his friend Celsius, its original discoverer near Upsal.

The root is supposed to be annual. Stem at first very short and simple, subsequently elongated above the origin of the fruitstalk, which is solitary, slender, not an inch high. Leaves numerous, ovato-lanceolate, acute, entire, single-ribbed, a little revolute, soon turning black; the upper ones paler and often broader. Capsule a little inclining, cylindrical, brown, shining, furrowed; ovate and even at the base, in which part it is internally strumous or solid. Lid conical, short. Fringe red, its teeth linear, very deeply divided, so as nearly to approach the character of a *Trichostomum*.

2419.

1697.

Dicranum stramineum.

DICRANUM strumiferum.

Swelling Fork-moss.

CRYPTOGAMIA Musci.

GEN. CHAR. *Caps.* oblong. *Fringe* of 16 flat, cloven teeth, a little inflexed.

SPEC. CHAR. Stem branched. Leaves linear-awl-shaped, twisted when dry. Capsule curved, furrowed, gibbons at the base.

SYN. Dicranum strumiferum. *Ehrh. Crypt.* 74. *Sm. Fl. Brit.* 1228. *Schrad Spicil.* 59. *Swartz. Musc. Suec.* 33.

Fissidens strumifer. *Hedw. Sp. Musc.* 160. *Crypt. v.* 2. 88. *t.* 32.

Bryum strumiferum. *Dicks. Crypt. fasc.* 3. 8. *With.* 833. *Hull.* 264.

NATIVE of boggy pastures in Scotland, found by Mr. Dickson, and since by other botanists. It is perennial, flowering in autumn and winter, ripening fruit in summer.

Stems an inch or two high, erect, branched, tufted, leafy, covered with rusty down in their lower part. Leaves light-green, narrow, keeled, single-ribbed, entire, except their long taper point, which is finely serrated. When dry they become curled, and their edge slightly revolute. The base is rather dilated. Fruitstalks lateral, slender, an inch long, orange-coloured or reddish. Capsule pale reddish brown, shining, obovate-oblong, furrowed, strongly incurved, tapering at the base, with a swelling there in front. Veil, straw-coloured, tipped with black. Lid awlshaped. Fringe pale red; its teeth transversely corrugated, with two pale taper points.

The curvature of the capsule, and the tumour at its base, distinguish this moss from *D. polycarpum*, *t.* 2269.

2420

Jun 1 1797 published by J. Sowerby, London.

HYPNUM attenuatum.

Taper-branched Feather-moss.

CRYPTOGAMIA Musci.

GEN. CHAR. *Caps.* ovate-oblong, from a lateral scaly sheath. *Outer fringe* of 16 teeth, dilated at the base: *inner* a variously-toothed membrane. *Veil* smooth.

SPEC. CHAR. Stem much branched. Branches incurved. Leaves ovate, pointed, imbricated, single-ribbed; the upper ones rather leaning one way, Capsule erect. Lid conical.

SYN. Hypnum attenuatum. *Schreb. Lips.* 100. *Dicks. Crypt. fasc.* 2. 13. *Sm. Fl. Brit.* 1279. *With* 860. *Hull.* 272.

H. repens trichodes arboreum majus, cauliculis ramosis. *Dill. Musc.* 331. *t.* 42. *f.* 66.

Leskia attenuata. *Hedw. Sp. Musc.* 230. *Crypt. v.* 1. 33. *t.* 12.

SUCH as we have only can we here present to our friends. Dillenius never saw the fruit of this moss, nor have we more than one aged capsule, on the specimen given by Mr. Dickson, gathered by him on trunks of trees in Scotland. It accords exactly with the specimens of Dillenius, and, if we are not much mistaken, with some, destitute of fructification, sent by Dr. R. A. Hedwig.

The stems are very much branched, leafy, ascending, entangled, the branches and their extremities incurved. Leaves imbricated every way, close-pressed when dry, dull-green, or tawny, ovate, broad, short, entire, single-ribbed, taper pointed; the upper ones rather curved, the same way as the branch. Sheaths pale. Fruitstalk an inch high, wavy, dark red. Capsule erect, cylindrical or somewhat ovate. Lid, according to Hedwig, much shorter than the capsule, conical, obtuse.

2421

1561.

Hypnum intricatum.

HYPNUM intricatum.

Matted Feather-moss.

CRYPTOGAMIA Musci.

GEN. CHAR. *Caps.* ovate-oblong, from a lateral scaly sheath. *Outer fringe* of 16 teeth, dilated at the base: *inner* a variously-toothed membrane. *Veil* smooth.

SPEC. CHAR. Stem creeping. Leaves lanceolate, taper-pointed, serrated, single-ribbed half way up, imbricated every way. Capsule drooping, tumid. Lid conical.

SYN. Hypnum intricatum. *Schreb. Lips.* 99. *Sm. Fl. Brit.* 1306. *Hewd. Sp. Musc.* 271. *Crypt. v.* 4. 73. *t.* 28. *Turn. Musc. Hib.* 167.

H. Teesdalii. *Dicks. Crypt. fasc.* 4. 16. *t.* 11. *f.* 13.

THE late Mr. Teesdale found this moss in Yorkshire, and communicated it to Mr. Dickson, who, not aware of its being already named, called it after its discoverer. What he had taken for *intricatum*, is now the *Teesdalii* of *Fl. Brit.* 1291, and is our *t.* 202.

The present species comes next to *velutinum*, *t.* 1568, from which it differs in being rather smaller, with narrower and more spreading leaves, and a rather more tumid capsule, much contracted at the mouth. The scales of the sheath are also much more taper-pointed, and obscurely toothed. Hedwig remarks that the ring which surrounds the mouth of the capsule consists of a double row of scales, not merely a single one, as in *velutinum*. This we have not examined. The fruit-stalk is finely granulated. Lid conical, somewhat oblique.

2422.
1578.

Hypnum atrovirens.

HYPNUM atro-virens.

Dark Round-branched Feather-moss.

CRYPTOGAMIA Musci.

GEN. CHAR. *Caps.* ovate-oblong, from a lateral scaly sheath. *Outer fringe* of 16 teeth, dilated at the base: *inner* a variously-toothed membrane. *Veil* smooth.

SPEC. CHAR. Stem diffuse, much branched. Leaves ovate, concave, entire, keeled, imbricated every way. Capsule drooping, obovate. Lid awl-shaped.

SYN. Hypnum atro-virens. *Dicks. Crypt. fasc.* 2. 10 *Sm. Fl. Brit.* 1307. *With.* 864. *Hull.* 274. *Turn. Musc. Hib.* 169.

H. denticulatum exiguum pendulum atro-virens. *Dill. Musc.* 332. *t.* 43. *f.* 67.

GATHERED on trees in Scotland, by Mr. Dickson, to whom we are obliged for this specimen. Dillenius had his from Patagonia. Dr. Scott is supposed to have found the same though without fruit, in Ireland

The stems and branches are much subdivided, leafy throughout, round, slender and rigid. Leaves of a remarkably dull and dark green, imbricated every way, broad-ovate, pointed, perfectly entire, concave, keeled, with a strong rib reaching to the point. Sheaths pale, closely imbricated, their leaves ovate, concave, entire, ribbed, with long taper points. Fruit-stalk hardly an inch long, smooth, dark red. Capsule drooping or pendulous, ovate at the base, contracted above, dilated at the mouth, brown, smooth. Lid, according to Dillenius, slender, awlshaped, curved.

2423
2148

Parmelia perforata?

LICHEN perforatus.

Perforate-shielded Lichen.

CRYPTOGAMIA Algæ.

GEN. CHAR. Male, scattered warts.
Female, smooth shields or tubercles, in which the seeds are imbedded.

SPEC. CHAR. Leafy, somewhat membranous, creeping, veinless, lobed; glaucous above; black and rough beneath; crenate and fringed with black hairs. Shields red-brown, at length perforated, with an entire, smooth, narrow margin.

SYN. Lichen perforatus. *Ach. Prodr.* 155. *Wulf. in Jacq. Coll. v.* 1. 116. *t.* 3.
Lichenoides glaucum, foliorum laciniis crinitis. *Dill. Musc.* 149. *t.* 20. *f.* 42. also *f.* 43. and 44, and *t.* 82. *f* 3.
Platisma perforatum. *Hoffm. Pl. Lich. v.* 1. 65. *t.* 13. *f.* 1. and *t.* 13 *B*; figures all copied from the above.
Parmelia perforata. *Ach. Meth.* 217.

WE have many times gathered this Lichen in Wales, on the trunks of old trees and on rocks, but could never find shields. We have it of a very large size, like *Dill. f.* 43, but still barren, from South America. Mr. W. Borrer sent the annexed specimen from Sussex, where the plant is not uncommon on trees and sand-rocks, but no fructification has been discovered. The shields in our plate are from America.

Although nearly related to *L. perlatus*, *t.* 342, there is an evident difference in the aspect of the present species, whose edges are much more finely crenate or cut. The large pearly marginal warts also are wanting, though the surface is here and there granulated. The shields have a very thin smooth and entire border, not an inflexed powdery or crenate one, and they are very remarkable for acquiring a large irregular hole in the centre, as soon as they advance towards maturity.

2424
804

Mentha viridis.

MENTHA viridis.

Spear Mint.

DIDYNAMIA Gymnospermia.

GEN. CHAR. *Cal.* 5-cleft. *Cor.* nearly regular, 4-cleft, its broadest segment notched. *Stamina* erect, distant.

SPEC. CHAR. Spikes interrupted. Leaves sessile, lanceolate, acute, naked. Bracteas bristle-shaped, somewhat hairy as well as the calyx-teeth. Flowerstalks very smooth.

SYN. Mentha viridis. *Linn. Sp. Pl.* 804. *Sm. Fl. Brit.* 612. *Tr. of Linn. Soc. v.* 5. 185. *Huds.* 250. *With.* 521. *Hull. ed.* 2. 171. *Woodv. t.* 170. *Sole Menth.* 11. *t.* 5.

M. Angustifolia spicata glabra, folio rugosiore, odore graviore *Raii Syn.* 233.

SPEAR-MINT of the gardens was observed to be truly wild in various parts of England by Mr. Hudson and Mr. Sole. Our specimen was the produce of a root sent by the latter. The separate leaf and flower came from a more common broader-leaved variety, which is intended in Ray's Synopsis above quoted, where other varieties, with broader and more rugged leaves, a somewhat stronger, less aromatic scent, and hairy calyx-teeth, (the ♀ and ♂ of *Fl. Brit.*) are mentioned. This spiked species is always known, under all its variations in other respects, by the perfect nakedness, roundness and polish of its flowerstalks. The base of the calyx, too, though glandular, is not hairy Even its teeth are naked in what makes our principal figure, which is the real *viridis* of the above authors. The whole plant is usually almost smooth. Leaves sessile, acute, sharply serrated. Flowers in long, taper, interrupted or whorled spikes, with taper-pointed bracteas, which, like the calyx and stem, often assume a dark-purple hue. Corolla light purple, smooth. The flavour of the whole is warm and aromatic, less grateful perhaps than peppermint, but more approved for salads and sauces.—The herb is perennial, flowering in August and September.

2423.
1065.

SONCHUS cæruleus

Blue Sow-Thistle.

SYNGENESIA Polygamia-æqualis.

GEN. CHAR. *Receptacle* naked. *Calyx* imbricated, swelling at the base. *Down* simple, sessile.

SPEC. CHAR. Flower-stalks and calyx briskly, racemose. Leaves somewhat lyrate; their terminal lobe triangular and very large.

SYN. Sonchus cæruleus. *Camer Epit.* 281. *Sm. Fl. Brit.* 815. *Hull. ed.* 2. 227

S. canadensis. *Linn. Sp. Pl.* 1115. *With.* 674.

S. alpinus. *Huds.* 336. *Fl. Dan. t.* 182. *Willd. Sp. Pl. v* 3. 1519.

S. flore cæruleo. *Ger. em.* 294.

THE beautiful Blue Sow-thistle of the Alps has found a place in the list of British plants, on the authority of Wallis's History of Northumberland, which turns out to be totally unworthy of regard, for Mr. Winch assures us his plant is only *Cichorium Intybus!* Fortunately however the genuine *Sonchus cæruleus* was discovered on the Aberdeenshire mountain of Lochnagore, by Mr. G. Don, who in September, 1801, sent us the leaf delineated in our plate.

This species is perennial, flowering in July and August. The stems are a yard high, erect, simple, leafy, each terminating in a long irregular cluster of large purplish-blue flowers, whose stalks, calyx, and narrow bracteas, are clothed with red prominent viscid bristly hairs, not unlike the pubresence of a rose. Leaves alternate, variously lyrate, with a very large, pointed and toothed, triangular terminal lobe, and clasping the stem with their dilated base. They are smooth and dark green above; glaucus beneath, with many veins and a hispid rib.

2420

1135.

ARTEMISIA cærulescens.

Blueish Mugwort.

SYNGENESIA Polygamia-superflua.

GEN. CHAR. *Recept.* naked or downy. *Seed-down* none. *Cal.* impricated, the scales roundish and closed. *Florets* of the radius awlshaped, undivided.

SPEC. CHAR. Leaves hoary; those of the stem lanceolate and undivided; the lower ones variously divided. Flowers erect, cylindrical. Receptacle naked.

SYN. Artemisia cærulescens. *Linn. Sp. Pl.* 1189. *Sm. Fl. Brit.* 866. *Huds.* 359. *With.* 711. *Hull. ed.* 2. 238.

A. marina. *Ger. em.* 1104.

Absinthium maritimun, lavendulæ folio. *Bauh. Pin.* 139. *Moris. sect.* 6. *t.* 1. *f.* 5. *Duham. Arb. v.* 1. 24. *t.* 7.

THAT no plant, asserted by any good authority to be a British native, may be wanting in this work, we are obliged to delineate a garden specimen of this, very expressively called by old writers Lavender-leaved Mugwort or Wormwood. Mr. Tofield assured his friend Hudson that it grew wild near Boston in Lincolnshire; which might very well be, as it is not uncommon on the sea shore of the milder climates of Europe. Gerarde says it grows in the isle of Wight; yet no botanist has recently found it in Britain. Mr. Tofield might mistake some variety of *maritima*, *t.* 1706, or *gallica*, *t.* 1001, for this; yet if the plants be compared, such an error seems very unlikely especially as the *cærulescens* is well known to most botanists.

Its glaucous hoary hue, leaves for the most part simple, lanceolate, bluntish and entire, of a considerable breadth, the lowermost only being lobed or pinnatifid, strongly mark the spieces. The flowers are abundant in August and September, and stand erect. The receptacle is naked and very minute.

2427

2425

Cladostephus spongiosus

CONFERVA spongoisa.

Scattered Spongy Conferva.

CRYPTOGAMIA Algæ.

GEN. CHAR. *Seeds* produced within the substance of the capillary or jointed frond, or in closed tubercles united with it.

SPEC. CHAR. Olive brown. Frond cartilaginous, variously branched, densely beset with scattered, incurved, slender, simple filaments. Joints about as broad as long. Capsules obovate, stalked.

SYN. Conferva spongiosa. *Huds.* 596. *With. v.* 4. 132. *Hull.* 332. *Lightf.* 983. *Dillw. Syn. n.* 133. *Conf. t.* 42.

Fucus hirsutus. *Linn. Mant.* 134.

F. teretifolius spongiosus pilosissimus. *Raii Syn.* 46.

FOUND on various parts of the British sea shores. Miss Biddulph has obligingly communicated it in fruit from Southampton, see *fig.* 1 ; along with *C. verticillata* in the same state, which we subjoin at *f.* 2, as an addition to our *t.* 1718.

C. spongiosa differs from *verticillata* in being more of an olive or greenish hue, and especially in the fine filaments which clothe its stem and branches being scattered, not whorled, as well as constantly simple. The capsules are stalked, obovate, situated on the shorter filaments of the branches, whereas those of the *verticillata*, not known to Mr. Dillwyn, are observed by Miss Biddulph to proceed from the filaments of the old stem only, and to be of an elliptic-oblong shape.

Cenomum crinitum

CONFERVA ciliata.

Ciliated Forcipated Conferva.

CRYPTOGAMIA Algæ.

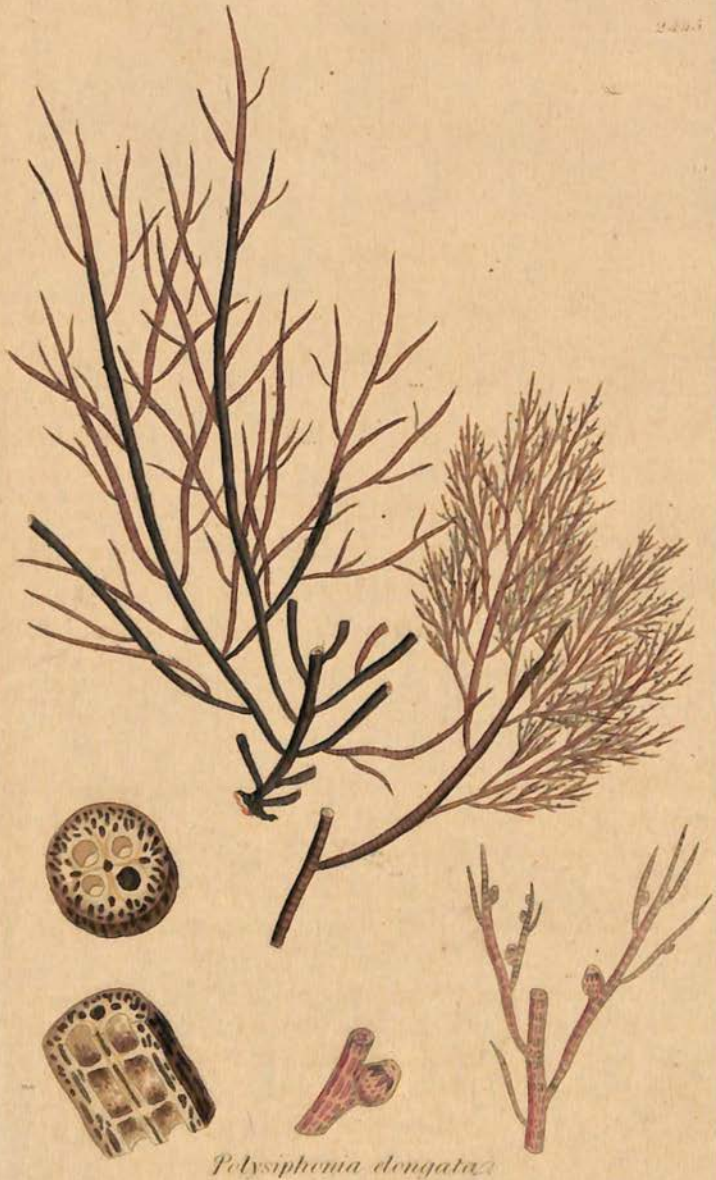
GEN. CHAR. *Seeds* produced within the substance of the capillary or jointed frond, or in closed tubercles united with it.

SPEC. CHAR. Pale red, dichotomous, forcipated at the tips. Joints short, fringed at their partitions. Capsules lateral, roundish, beset with short branches.

SYN. Conferva ciliata. *Ellis in Phil. Trans. v.* 57. 425. *t.* 18. *f.* h H. *Huds.* 599. *With. v.* 4. 137. *Hull.* 333. *Lightf.* 988. *Dillw. Syn. n.* 137. *Conf. t.* 53.

THIS beautiful little *Conferva*, whose singularly elegant appearance under a microscope can never leave its species in doubt, is found commonly enough on the sea coast, growing either on stones, or on various submarine plants, in reddish tufts, scarcely two inches high. Each frond grows from a callous root, and is very much branched and forked, the tips incurved like a pair of forceps. The joints are about as broad as long, pellucid, often nearly colourless. Partitions red, fringed with short, white, spreading, pellucid spines. Seeds red, dense, in globular lateral capsules, sessile amongst a few short branches.

Mr. Ellis first published any account of this plant. Linnæus had a specimen, but left it undescribed.



Polysiphonia elongata?

CONFERVA elongata.

Long pointed Conferva.

CRYPTOGAMIA Algæ.

GEN. CHAR. *Seeds* produced within the substance of the capillary or jointed frond, or in closed tubercles united with it.

SPEC. CHAR. Purplish brown. Filaments very much branched, with elongated taper points, diffuse, cartilaginous, reticulated with veins. Joints much broader than long, compound, with four central tubes. Capsules lateral, ovate, sessile.

SYN. Conferva elongata. *Huds.* 599. *With. v.* 4. 137. *Hull.* 333. *Dillw. Syn.* 80. *Conf. t.* 33.

COMMON on the sea shores of Britain, and the largest of its genus, though not the longest, found here, or probably any where else. Mr. Borrer sent it with capsules in October. Mr. Dillwyn says this is often called the Lobster-horn Conferva, in allusion, as it seems, to the tapering and jointed aspect of the branches.

The bushy spreading fronds, originating from a small callous base, are usually about a foot high, of a clear purplish brown, very closely jointed, flexible but elastic; minutely reticulated externally with many veins; internally composed of four parallel, central, interrupted tubes, in the youngest branches as well as oldest stems. Capsules among the upper ramifications, sessile, lateral, solitary, ovate, striated, of the colour of the branches.

2430
1342
Salix alba.

SALIX alba.

Common White Willow.

DIOECIA Diandria.

GEN. CHAR. Male, *Cal.* the scales of a catkin. *Cor.* none. *Nectary* a gland at the base of the stamina. *Stam.* 1—5. Female, *Cal.* and *Nect.* like the male. *Cor.* none. *Stigmas* 2. *Caps.* superior, of one cell and 2 valves. *Seeds* downy.

SPEC. CHAR. Leaves elliptic-lanceolate, acute, serrated, permanently silky on both sides; the lowest serratures glandular. Stigmas deeply cloven.

SYN. Salix alba. *Linn. Sp. Pl.* 1449. *Sm. Fl. Brit.* 1071. *Huds.* 430. *With.* 55. *Hull ed.* 2. 296. *Relh.* 387. *Sibth.* 18. *Abbot.* 213. *Hoffm. Sal. v.* 1. 41. *t.* 7, 8.

Salix. *Raii Syn.* 447. *Ger. em.* 1389.

ONE of the most general Willows on low wet commons, and in moist places about rivers and ditches, blossoming in May. It rises gradually to a tall tree, and has a thick bark, full of cracks, one of the best in the genus for tanning, and said also to partake of the virtues of Peruvian bark. The branches spread widely, drooping more or less, and the young ones are silky. The grey silvery hue of the leaves renders the tree remarkable; this is caused by close-pressed silky hairs, most abundant on the under side, and permanent on both. The shape of the leaves is lanceolate, rather dilated upwards, inclining to elliptic or obovate; the point acute, but not elongated; the margin regularly and acutely serrated, the lower serrtures glandular. Stiplas either roundish or oblong, but small, and often wanting. Catkins terminating short lateral shoots; the male ones yellow, their scales, and the base of the stamens, hairy, nectary double; females green, their germen ovato-lanceolate, nearly sessile, smooth; stigmas spreading, deeply cloven, with a short style.

2431
1342*

SALIX cærulea.

Blue Willow.

DIOECIA Diandria.

GEN. CHAR. Male, *Cal.* the scales of a catkin. *Cor.* none. *Nectary* a gland at the base of the stamina. *Stam.* 1—5. Female, *Cal.* and *Nect.* like the male. *Cor.* none. *Stigmas* 2. *Caps.* superior, of one cell and 2 valves. *Seeds* downy.

SPEC. CHAR. Leaves lanceolate, taper-pointed, serrated; the under side at length almost naked; the lowest serratures glandular. Stigmas deeply cloven.

SYN. Salicis albæ varietas. *Sm. Fl. Brit.* 1072.

THIS Willow, mentioned in the *Fl. Brit.* as a variety of *S. alba*, is so remarkable and so valuable, that we venture to name it as a species, that it may be the more noticed. The male flowers, when known, may perhaps afford better characters than we have been able to obtain from the leaves. The late Mr Crowe, who found the female plant wild in Suffolk, was of opinion that this might be taken for *S. alba* in many parts of England, the real one, *t.* 2430, not being known in some of the northern counties. He had for many years paid great attention to the cultivation of this tree, as have Mr. Rigby at Framingham, and Mr. Browne at Hetherset, Norfolk. A cutting planted by the latter became in ten years a tree thirty-five feet high, and five feet two inches in girth, having been blown down in 1800; which is a rapidity of growth beyond all comparison with that of the Common White Willow, and even exceeding *S. Russelliana*, *t.* 1808. The wood and bark are at least equal in quality to those of *alba*. The foliage is distinguished by its greater luxuriance, more blue hue, and the almost entire loss of the hairs from the under side of the adult leaves. Mr. Crowe thought the stipulas might afford distinctions, but we find them too variable.

2432

1608.

Fontinalis capillacea.

Hy... published by J. C. ... London

FONTINALIS capillacea.

Bristly Water-moss.

CRYPTOGAMIA Musci.

GEN. CHAR. *Caps.* oblong, lateral, inclosed in a scaly sheath. *Outer fringe* of 16 teeth, dilated at the base; *inner* reticulated.

SPEC. CHAR. Leaves linear-bristleshaped, spreading. Sheaths and fruitstalks elongated and threadshaped; the scales acute, overtopping the capsule.

SYN. Fontinalis capillacea. *Dicks. Crypt. fasc.* 2. 1. *Sm. Fl. Brit.* 1337. *With.* 789. *Hull.* 275.

F. capillacea, calycibus stili instar cuspidatis. *Dill. Musc.* 260. *t.* 33. *f.* 5.

GIVEN us by Mr. Dickson, who gathered it in alpine streamlets in Scotland. The whole plant is of a brownish green, about a span long, branched in a pinnate manner. Leaves imbricated, spreading nearly equally every way, not sickle-shaped and curved to one side as in *F. falcata* of Swartz and Hedwig, which has often been confounded with this, even by Linnæus and Ehrhart, but is not known to be a British moss. The form of the leaves is very slender, almost hair-like, and they are keeled, with a midrib. Sheaths either lateral, or terminating some short branch, long and threadshaped, consisting of thin, convoluted, acute scales, the innermost longest, enveloping and concealing the capsule, which in our specimen is too imperfect to be delineated.

2433.

1486.*

Bryum attenuatum.

July 1 1806 published by J. & T. Sowerby, London.

BRYUM attenuatum.

Slender Proliferous Thread-moss.

CRYPTOGAMIA Musci.

GEN. CHAR. *Outer fringe* of 16 teeth, broad at the base: *inner* a toothed membrane. *Flowers* terminal. *Capsule* ovate-oblong, smooth. *Veil* smooth.

SPEC. CHAR. Stem simple, proliferous. Leaves stellate, ovate, entire, reticulated. Capsule club-shaped, somewhat cylindrical, erect.

SYN. Bryum attenuatum. *Dicks. Crypt. fasc.* 4. 8. *t.* 10. *f.* 8. *Sm. Fl. Brit.* 1360.

COLLECTED by Mr. Dickson in bogs on the mountains of Scotland. Mr. D. Turner, who has examined the fringe, assures us it is that of a *Bryum*; further we know nothing, except from a drawing made by Mr. Sowerby from an original specimen.

The stems are simple, slender, about an inch high, throwing out roots here and there, and apparently making annual shoots, each of which is marked by a sort of tuft or whorl of crowded leaves, which are ovate, acute, entire, single-ribbed, pellucid and reticulated. Capsule on a solitary, slender, pale, terminal stalk, obovate, slender, tapering at the base, smooth, contracted at the mouth. Lid small, convex. Fringe not sufficiently advanced to be observed.

2434.
1491.

Bryum stellare.

BRYUM stellare.

Starry-leaved Thread Moss.

CRYPTOGAMIA Musci.

GEN. CHAR. *Outer fringe* of 16 teeth, broad at the base: *inner* a toothed membrane. *Flowers* terminal. *Capsule* ovate-oblong, smooth. *Veil* smooth.

SPEC. CHAR. Stem branched. Leaves ovate, pointed, reticulated with roundish interstices; the upper ones serrated and stellate. Capsule oblong, pendulous.

SYN. Bryum stellare. *Roth. Germ. v.* 3. 240. *Sm. Fl. Brit.* 1367.

B. proliferum, var. 2 *Hull.* 266.

B. serpyllifolium . *Huds.* 492.

B. stellare roseum pendulum minus, capsulis et setis longioribus. *Dill. Musc.* 412. *t.* 52. *f.* 78.

B. roseum minus, foliis subrotundis. *Raii Syn.* 92.

Mnium stellare. *Hedw. Sp. Musc.* 191. *t.* 45. *f.* 1—4.

M. proliferum, var. 2. *With.* 807.

FOUND occasionally in woods, and moist heathy spots. The stem is an inch or two high, branched in a determinate manner, leafy and perennial, with many rusty radicles. Leaves light green, ovate or obovate with a short point, and a strong red rid. Under a magnifier they are found beautifully reticulated with roundish interstices. The lower ones are entire; the uppermost are crowded and stellate, and their tips are more or less serrated. Fruitstalk solitary, two inches high, smooth, rather stiff, not quite straight. Capsule pendulous, cylindrical inclining to obovate. Lid hemispherical with a small point.

2435
1634
Polytrichum strictum

POLYTRICHUM strictum.

Close-leaved Hair-moss.

CRYPTOGAMIA Musci.

GEN. CHAR. *Outer fringe* of 32 or 64 short incurved teeth: *inner* a flat undivided membrane. *Veil* generally double: the *outer* hairy.

SPEC. CHAR. Leaves lanceolate; their margins inflexed, entire. Capsule quadrangular, on a flat pedestal. Stem branched.

SPEC. CHAR. Leaves lanceolate; their margins inflexed, entire. Capsule quadrangular, on a flat pedestal. Stem branched.

SYN. Polytrichum strictum. *Menz. Tr. of Linn. Soc. v.* 4. 77. *t.* 7. *f.* 1. *Sm. Fl. Brit.* 1376. *Hull.* 247. *Turn. Musc. Hib.* 83.

A NATIVE of dry, barren, mountainous places. We have it from Scotland, by favour of Mr. G. Don, as well as an authentic specimen from Mr. Menzies. The branched stem, with a greater quantity of soft white woolly down about the roots, and the more upright or close position of the leaves, are supposed to constitute a specific difference between this and *P. juniperinum*, *t.* 1200. The branches moreover are sometimes very long, and from the close-pressed leaves, at least in dry weather, look very slender, with a pale, more red or rusty aspect than is observable in the *juniperinum*. Nevertheless, we are inclined, with Mr. Turner, to suspect it a variety only, though certainly a remarkable one. The tips of the leaves are slightly serrated, but on that we dare not lay any great stress in this case.

2436.
1829.

Jungermannia connivens.

JUNGERMANNIA connivens.

Forcipated Jungermannia.

CRYPTOGAMIA Hepaticæ.

GEN. CHAR. Male flowers sessile.

Capsule on a stalk rising from a sheath, of 4 valves.

Seeds attached to elastic filaments.

SPEC. CHAR. Shoots branched, creeping. Leaves in two rows, ovate, rather concave, cloven, with acute, forceps-like points. Sheaths cylindrical, elongated, many-toothed, terminating very short lateral branches.

SYN. Jungermannia connivens. *Dicks. Crypt. fasc.* 4. 19*t.* 11. *f.* 15.

GATHERED by C. Lyell, Esq., upon *Sphagnum latifolium*, in a small bog at the north-east corner of Furzy-lawn inclosure, New Forest, in April last.

The whole plant is very delicate, entangled amongst the *Sphagnum*, and nearly agreeing with its pale whitish-green colour. In many respects this species accords with *bicuspidata*, *t.* 2239, near which it ought to be arranged; but the leaves are more rounded, less deeply divided, and remarkable for the incurvation of their acute segments, which in that respect imitate a pair of forceps. The sheaths are long and nearly cylindrical, bordered with many slender parallel teeth, and grow at the ends of short lateral branches, not at the summits of the main shoot or stem.

2437

1833

Jungermannia nemorosa

JUNGERMANNIA resupinata.

Curled Jungermannia.

CRYPTOGAMIA Hepaticæ.

GEN. CHAR. Male flowers sessile.

Capsule on a stalk rising from a sheath, of 4 valves. *Seeds* attached to elastic filaments.

SPEC. CHAR. Stems ascending, branched, recurved at the summit. Leaves in two rows, roundish, crenate; their side-lobes acute, imbricated. Sheaths scattered, crenate.

SYN. Jungermannia resupinata. *Linn. Sp. Pl.* 1599. *Huds.* 512. *With.* 875. *Hull.* 280. *Lightf.* 776.

Lichchenastrum auriculatum, pinnulis rotundis, crispum. *Dill. Musc.* 491. *t.* 71. *f.* 19.

L. trichomanis facie, capitulis e foliorum summitate enascentibus, medium. *Dill. in Raii Syn.* 112.

SENT from the New Forest, in April and May, by C. Lyell Esq. It comes nearest to *J. nemorosa*, *t.* 607 but has a more curled or turgid appearance, the young extremities of the branches being revolute. The leaves are broad, roundish or obovate, finely crenate, their side-lobes ovate, acute. The sheaths though sometimes, terminal, usually grow from the lower parts of the branches, and are slightly tumid, finely crenate, of a rather large proportion.

2436.
2287.

Scyphophorus fimbriatus.

July 1st published by J. Sowerby, London

LICHEN fimbriatus.

Fringed Cup Lichen.

CRYPTOGAMIA Algæ.

GEN. CHAR. Male scattered warts
Female, smooth shields or tubercles, in which the seeds are imbedded.

SPEC. CHAR. Cup-shaped. Leaves cartilaginous, lobed and crenate. Stalks cylindrical, white, dilated at the summit into an impervious cup, fringed with acute teeth, tipped with small brown tubercles

SYN. Lichen fimbriatus. *Linn. Sp. Pl.* 1619. *Ach. Prod.* 187. *With. v.* 4. 37. *Hull.* 303. *Lightf.* 870. *Relh* 469. *Sibth.* 332. *Abbot.* 268.
L. pyxidatus β. *Huds.* 552.
Lichenoides tubulosum pyxidatum, marginibus serratis. *Dill. in Raii Syn.* 69.
Bæomyces fimbriatus. *Ach. Meth.* 341.
Coralloides scyphiforme gracile, marginibus serratis. *Dill. Musc.* 84. *t.* 14. *f.* 8.

THIS grows on the ground in healthy mountainous places. We have gathered it near Edinburgh, bearing tubercles, which Dillenius says are rarely seen.

It is considered by Acharius as so near the common *L. pyxidatus*, *t.* 1393, that he doubts whether it be more than a variety. The same question may arise concerning many of this tribe, but this appears to us as distinct from *pyxidatus* as most others. The neat elegant slenderness, and white colour, of the stalks, are characteristic, and the sharp triangular teeth, which border the cups, are peculiar. The tubercles also are very different, being always minute, reddish brown, at the end of each tooth. The margin is occasionally proliferous, and in some of the younger cups, the tubercles are almost confluent and sessile, but each seems to become subsequently elevated.

2439

2293.

Scyphophorus digitatus.

LICHEN digitatus.

Fingered Cup Lichen.

CRYPTOGAMIA Algæ.

GEN. CHAR. Male, scattered warts.

Female, smooth shields or tubercles, in which the seeds are imbedded.

SPEC. CHAR. Obscurely cup shaped, pale grey, mealy. Stalks subdivided, digitate and radiating. Tubercles terminal, deep scarlet. Leaves minute, lobed and crenate.

SYN. Lichen digitatus. *Linn. Sp. Pl.* 1620. *Ach. Prod.* 188. *With v.* 4. 39. *Hull* 304. *Lightf.* 874. *Relgh* 469.

L. pyxidatus β. *Huds.* 554.

Lichenoides coralliforme, apicibus coccineis. *Raii Syn.* 68.

Bæomyces digitatus, *Ach. Meth.* 333.

Coralloides ramulosum, tuberculis coccineis. *Dill. Musc.* 96. *t.* 15. *f.* 19.

ONE of the most beautiful of its family, found on rotten trees, or on the ground, in mountainous places, but not frequently. The late Mr. J. Burgess Mac-Garroch gathered our specimens near Kirkmichael, Dumfries-shire. The present plant is considered as nearly related to *L. cocciferus*, *t.* 2051, but differs in having scarcely any form of a cup, but in its stead numerous branches spring from one centre, each being either simple or divided, and tipped with a tubercle of a rich deep scarlet, that elegantly contrasts with the grey mealiness of the stalks and finely divided foliage.

Tordylium officinale.

TORDYLIUM officinale.

Small Hart-wort.

PENTANDRIA Digynia.

GEN. CHAR. *Invol.* long and undivided. *Corolla* radiant. *Flowers* all hermaphrodite. *Fruit* nearly orbicular, flattened, notched in the margin.

SPEC. CHAR. Partial involucrum about as long as the flowers. Leaflets ovate, cut, crenate. Stem downy.

SYN. Tordylium officinale. *Linn. Sp. Pl.* 345. *Sm. Fl. Brit.* 294. *Huds.* 112? *With.* 286? *Hull. ed.* 2. 78.

T. sive Seseli Creticumminus. *Raii Syn. ed.* 2. 102.

T. Narbonense minus. *Dill. in Raii Syn.* 206, with an erroneous place of growth.

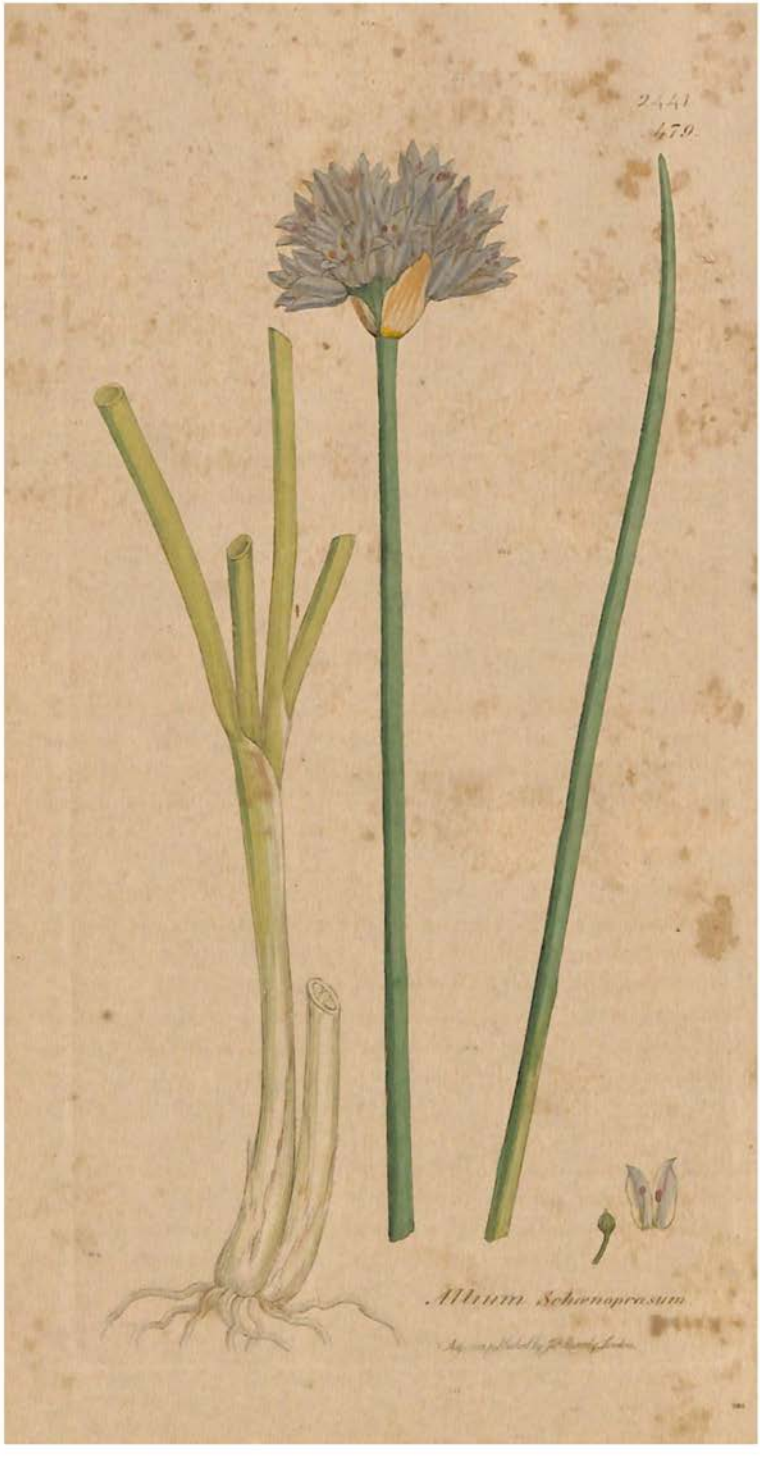
Seseli creticum minus. *Ger. em.* 1050.

ALTHOUGH this plant be no longer found about Isleworth, where Mr. Doody observed it in Ray's time, the latter was too acurate a botanist to leave us in any doubt as to its identity, though Dillenius, in his edition of the *Synopsis*, transposed the places of growth of this and *T. maximum*, *t.* 1173. The latter is the Oxford plant, and was found by the late Mr. Gotobed, a few years ago, near Eton.

The present is an annual of more humble growth, whose stem is clothed with fine, dense, soft, deflexed hairs, not rigid bristles. The leaflets are, as Ray says, roundish, not lanceolate, except the uppermost, and grow on long stalks. Flowers white or flesh-coloured; their two outer petals remarkably radiant, one lobe of each being disproportionately large, very different from those of *T. maximum*. The seed moreover has a very elegant, thick, crenate border.

We have of course been obliged to describe an exotic specimen.

2441
479



Allium Schœnoprasum

ALLIUM Schœnoprasum.

Chive Garlick.

HEXANDRIA Monogynia.

GEN. CHAR. *Cor.* inferior, of 6 spreading petals. *Spatha* cloven, containing many flowers. *Umbel* dense. *Stigma* simple

SPEC. CHAR. Stalk naked, round, the height of the foliage. Leaves round, somewhat tapering.

SYN. Allium Schœnoprasum. *Linn. Sp. Pl.* 432. *Sm. Fl. Brit.* 360. *Lightf.* 180. *Huds.* 649. *With.* 335. *Hull ed.* 2 95. *Fl. Dan. t.* 971.
Schænoprasum. *Ger. em.* 176

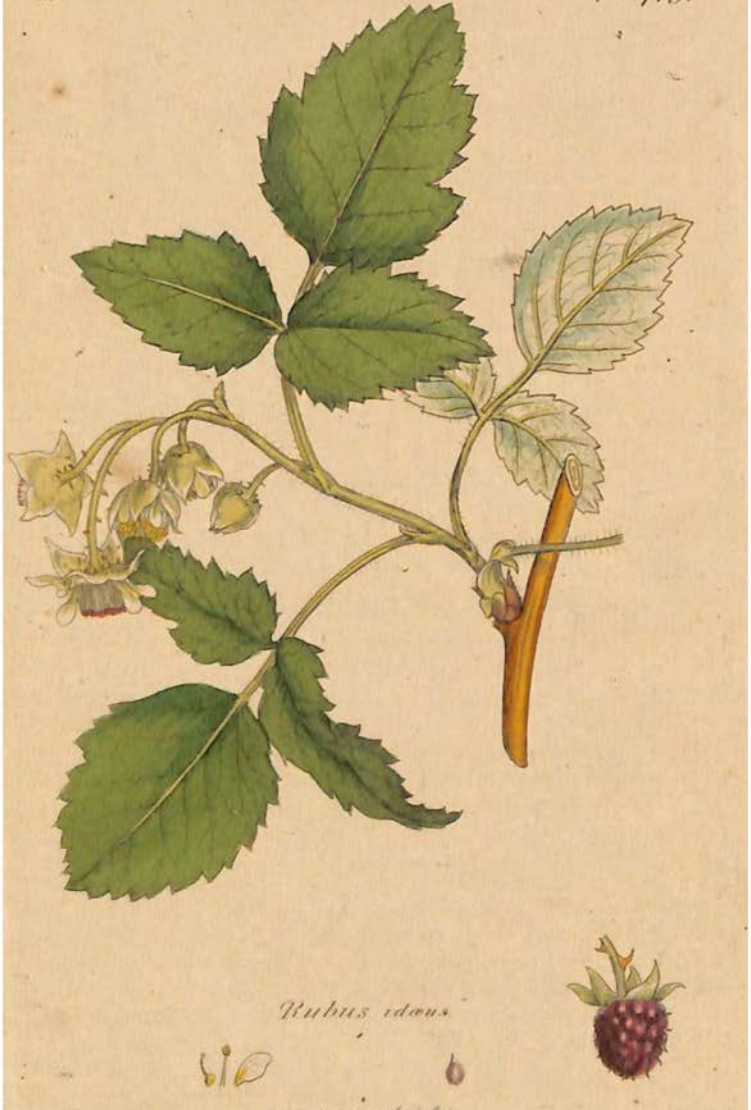
DR. PARSONS, formerly lecturer on anatomy at Oxford, observed this plant wild, as he judged, by Fast castle, on the borders of Berwickshire, and Mr. Lightfoot was told it had been found in the Nether Lorne, Argyleshire. Hudson and Withering says it grows in Westmoreland and Yorkshire, so we presume there can be no doubt on the subject. We have only seen garden specimens. This species is often cultivated by cottagers, being eaten either raw or dressed, like others of its fœtid brethen.

The roots consist of slender, pale, upright, tufted, prennial bulbs. Leaves three or four, radical, slightly spreading, tubular, cylindrical, taper-pointed, rather glaucous, sheathing the stalk with their dilated bases. Stalk solitary, about a foot high, being nearly the height of the leaves, cylindrical, smooth. Spatha of two ovate leaves, shorter than the umbel, which is dense, formed of many purplish-rosecoloured flowers, whose stamens are all simple.

The reader of the *Flora Britannica* is requested to correct an error of the press in the name, which should be written as above, alluding to the habit of the plant, from [illegible] *rush.*

2442.

719.



Rubus idæus

Aug.1 1831 published by Jas Sowerby London

RUBUS idæus.

Rasp-berry.

ICOSANDRIA Polygynia.

GEN. CHAR. *Cal* 5-cleft. *Petals* 5. *Berry* superior. composed of several single-seeded grains.

SPEC. CHAR. Leaves pinnate, with five or three leaflets, downy beneath. Footstalks channelled. Stem prickly.

SYN. Rubus idæus. *Linn. Sp. Pl.* 706. *Sm. Fl. Brit.* 541. *Huds.* 220. *With* 468. *Hull. ed.* 2. 149. *Sibth.* 149. *Abbot.* 111. *Fl. Dan. t.* 788. *Woodv. Med. Bot. t.* 138. *Ger. em.* 1262.

R. idæus spinosus, fructu rubro. *Raii Syn.* 467.

PLENTIFUL in mountainous woods and thickets in Wales, Scotland, and the north of England. Our specimens, truly wild, grew in a wood at the back of Thorpe, near Norwich, flowering in June. In gardens the Raspberry is sufficiently known, and duly esteemed. The rich perfume of its fruit renders it highly acceptable as a preserve, even in India.

The roots are perennial and creeping. Stems shrubby, though only biennial, erect, four feet high, branched, round, leafy, rough with small prickles. Lower leaves pinnate with two pair of leaflets and an odd one; upper ternate only. Leaflets ovate or rhomboid, unequally and sharply serrated or cut, strongly veined; green and slightly downy above; snow-white and densely cottony beneath. Footstalks channelled above downy and prickly like the flowerstalks, which grow in clusters. Flowers pendulous. Petals small, greenish white. Fruit crimson, of numerous pulpy grains, beset with permanent styles. The wild raspberries, though small, are preferred for their flavour to those of the garden, where they grow in sufficient plenty to supply the table.

2443

1860.

Jungermannia juniperina

JUNGERMANNIA juniperina.

Juniper Jungermannia.

CRYPTOGAMIA Hepaticæ.

GEN. CHAR. Male flowers sessile.
Capsule on a stalk rising from a sheath, of 4 valves.
Seeds attached to elastic filaments.

SPEC. CHAR. Shoots erect, but little branched. Leaves in four rows, imbricated every way, curved to one side, in two deep linear-lanceolate segments. Sheaths terminal, ovate, many-cleft.

SYN. Jungermannia juniperina. *Hooker Brit. Jung. t.* 4.
J. adunca. *Dicks. Crypt. fasc.* 3. 12. *t.* 8. *f.* 8. *With.* 881. *Hull.* 280.

COMMUNICATED by Mr. Turner, and Mr. G. Don; as well as by Dr. Wood from Dublin. It is said to be found on shady parts of many Scottish and Irish mountains.

The stems grow in dense tufts, several inches broad, and are very slender, from two to five inches high, simple or somewhat branched, clothed, more or less closely, with four rows of small, pale olive, sickle-shaped leaves, cloven above half-way down into two linear-lanceolate, equal, acute, entire segments. The edges of the leaves are entire; their substance strongly reticulated; and there are no stipulas or scales at their base. The sheaths are terminal, solitary, enveloped in leaves, bell-shaped cut half-way down into several segments like those of the foliage. Fruitstalk short. Capsule brown, dividing into four ovate recurved valves, which soon split irregularly into more.

Our fructification is taken from a specimen, gathered by Mr. Menzies, at Bank's isles, on the west coast of North America, which exactly agrees with the British ones, and revives slowly in water; in which respect Mr. Hooker says our plant differs from the West Indian *J. juniperina* of Swartz; still he judged it best to consider them as varieties of one species.

2444.
2276

Cladonia pungens.

LICHEN pungens.

Pointed Shrubby Lichen.

CRYPTOGAMIA Algæ.

GEN. CHAR. Male, scattered warts.
Female, smooth shields or tubercles, in which the seeds are imbedded.

SPEC. CHAR. Shrubby, tubular, grey, forked, much branched, without axillary perforations; branches twisted and entangled, taper-pointed. Tubercles minute, terminal, solitary, brownish-black.

SYN. Lichen pungens. *Ach. Prod.* 202.
Bæomyces pungens. *Ach. Meth.* 354.

GATHERED upon Esher Common in Surry, by Mr. W. Borrer, and on that gentleman's authority, so great in this tribe, we publish this Lichen under the above name, having ourselves no materials for forming a decisive judgement. For this an original specimen from Dr. Acharius would be necessary.

It comes very near *L. uncialis*, *t.* 174, but is said to want the axillary perforations. We find however, not very unfrequently, lateral fissures below the origin of the clustered branches, but these are indeed different from the round central openings of *uncialis*. The branches too are more twisted and zigzag; Acharius says they are more brittle. The colour is a greenish grey. The numerous, sharp, tapering, ultimate branches are tipped with a brownish black; of which colour also are the small, solitary, round tubercles found at the extremities of some of them.

2443.
2324.
Desmarestia aculeata?

FUCUS aculeatus.

Prickly Fucus.

CRYPTOGAMIA Algæ.

GEN. CHAR. *Seeds* produced in clustered tubercles, which burst at their summits.

SPEC. CHAR. Frond cartilaginous, thread-shaped, much branched; branches linear, compressed, bordered with scattered, awlshaped, upright teeth.

SYN. Fucas aculeatus. *Linn. Sp. Pl.* 1632. *Huds.* 585. *With v.* 4. 113. *Hull.* 323. *Gooden. & Woodw. Tr. of Linn. Soc. v.* 3. 179. *Turn. Syn.* 262. *Hist. Fucor. v* 3 122 *t.* 187. *Stackh. Ner.* 24. *t.* 8. *Lightf.* 924.

F. muscoides. *Linn. Sp. Pl.* 1630? *Huds.* 590?

F angustifolius, foliis dentatis. *Raii Syn.* 48.

NOT unfrequent on the coasts of Britain. The root is a small, callous, perennial disk. Stalk of the frond round, subdivided and cartilaginous; upper part repeatedly and alternately branched, compressed, olive-coloured; the branches linear, very narrow, flat, tapering at the base and summit; their edges fringed with scattered, awlshaped, slightly spreading, soft teeth or bristles. Mr. Turner quotes Mrs. Griffiths and Miss Hutchins, whose discoveries we have so often mentioned, as having detected, in an early state of this plant's growth, little tufts of fine, jointed, compound filaments, resembling a minute *Conferva*, which falling off are succeeded by the above-mentioned teeth; the latter perhaps being the elongated bases, or stalks, of such tufts. Various appearances have been mentioned by different botanists as the fruit of this spécies, but none ascertained to be so. What the *F. muscoides* of Linnæus really was, we find no original specimen to determine.

Dacrymyces moniformis.

Aug.st 1st published by J.E. Smith & Sowerby London

TREMELLA moriformis.

Mulberry Tremella.

CRYPTOGAMIA Algæ.

GEN. CHAR. *Fructification* scarcely perceptible, in a membranous jelly-like substance.

SPEC. CHAR. Sessile, clustered, twisted, black, opaque; internally fleshy, deep purple.

FOUND by Mr. C. E. Sowerby, on pales and rails between Hoodly gate and Measthам, Surry, early in June last. We can discover no synonym for this plant, and therefore venture to publish it as new.

It grows sessile, on exposed wrought wood, in roundish or oblong, tumid, sinuous masses, of various sizes, not unlike mulberries in appearance, except being coal-black. Internally however they are of a rich deep purple hue. The substance is fleshy, attached by strong central roots. When dried between paper, a violet stain is communicated to whatever the plant touches.

2447

2573

Exidia Aurecula Judæ

TREMELLA Auricula.

Jew's-ear Tremella.

CRYPTOGAMIA Algæ.

GEN. CHAR. *Fructification* scarcely perceptible, in a membranous jelly-like substance.

SPEC. CHAR. Sessile, leathery, reddish brown; rough beneath; rugged and plaited above, resembling an ear.

SYN. Tremella Auricula. *Linn. Sp. Pl.* 1625. *Huds.* 563. *Pers. Syn.* 624. *Bull. t.* 427. *f.* 2.

Peziza Auricula. *With. v.* 4. 351. *Hull.* 405. *Relh.* 525. *Sibth.* 387. *Bull. Fung. v.* 1. 241.

P. auriculam referens. *Raii Syn.* 18.

Agaricum auriculæ formâ. *Mich: Gen.* 124. *t.* 66. *f.* 1.

GENERALLY found upon rotten stumps of the Elder-tree. This species is of a semi-transparent, more or less deep, reddish brown, the under surface darkest, opaque, and roughish; the upper smooth and more shining, corrugated; the plaits branching from the middle part where they are strongest, and somewhat convoluted, so as to convey an idea of the human ear. When this plant grows on a perpindicular stump or tree, it turns upwards.

Bulliard, though he first published a figure of the present species as a *Tremella*, has, in his text, removed it to *Peziza*, "because," he says, "the seeds are not discharged from every point of its surface, but only from the upper side."

2448
2575

Exidia glandulosa

TREMELLA arborea.

Witches' Butter Tremella.

CRYPTOGAMIA Algæ.

GEN. CHAR. *Fructification* scarcely perceptible, in a membranous jelly-like substance.

SPEC. CHAR. Sessile, gelatinous, roundish, undulated, blackish, beset with mammillary white-headed processes on the upper-side.

SYN. Tremella arborea. *Huds* 563. *With. v.* 4. 78. *Hull.* 309. *Relh.* 477. *Sibth.* 390. *Abbot.* 271.

T. glandulosa. *Bull. t.* 420. *f.* 1.

T. arborea nigricans, minùs pinguis et fugax. *Dill. Musc.* 54. *t.* 10. *f.* 15.

COMMON upon fallen trees and dead sticks in the winter months; Bulliard says, most frequently on the Alder. It consists of roundish unequal masses, rarely elevated on any thing like a stalk; lobed above; most corrugated beneath. The substance is thickish and gelatinous; the colour pale and transparent at first, but soon changing to brown and almost black. The upper surface bears scattered upright short prominences, each with a black cylindrical base, and a convex white head, in which one would presume the fructification to be lodged. Dillenius says it is called, in Herefordshire, Witches' butter, because, when thrown into the fire, it is believed to be efficacious against witchcraft.

The plant figured in Jacq. Coll. v. 3. t. 12. f. 2, greenish and membranous in its appearance, must surely be different from this; nor can we, even doubtingly, refer ours to the family of Lichens, as Acharius has done, *Prod.* 139. *Meth.* 246.

SYSTEMATICAL INDEX

TO

VOL. XXXIV.

	Tab.
Triandria.	
ERIOPHORUM capitatum	2387
——, gracile	2402
Pentandria.	
Echinophora spinosa	2413
Tordylium officinale	2440
Hexandria.	
Allium Schœnoprasum	2441
Decandria.	
Arbutus Unedo	2377
Icosandria.	
Rosa cinnamomea	2388
Rubus idæus	2442
Potentilla tridentata	2389
Polyandria.	
Cistus ledifolius	2414
Ranunculus alpestris	2390
Didynamia.	
Mentha viridis	2424
—— acutifolia	2415
Tetradynamia.	
Cochlearia groenlandica	2403
Syngenesia.	
Sonchus cærulpus	2425
Hieracium cerinthoides	2378
—— villosum	2379
Artemisia cærulescens	2426
Erigeron uniflorum	2416
Monoecia.	
Carex ustulata	2404
Dioecia.	
Salix alba	2430
—— cærulea	2431
Cryptogamia.	
Splachnum urceolatum	2417
Dicranum Celsii	2418
—— strumiferum	2419
Trichostomum pusillum	2380
—— glaucescens	2381
Tortula convoluta	2382
—— nervosa	2383
—— stellata	2384
—— barbata	2391
—— imberbis	2392
—— aristata	2393
Hypnum attenuatum	2420
—— striminéum	2405
—— adnatum	2406
—— confertum	2407
—— intricatum	2421
—— atro-virens	2422
Fontinalis capillacea	2432
Bryum triquetrum	2394
—— attenuatum	2433
—— stellare	2434
—— roseum	2395
Polytrichum strictum	2435
Jungermannia connivens	2436
—— resupinata	2437
—— juniperina	2443
Lepraria ochracea	2408
—— nigra	2409
Spiloma microscopicum	2396
—— murale	2397
—— dispersum	2398
—— decolorans	2399
Variolaria griseo-virens	2400
—— aspergilla	2401
—— lactea	2410
—— cinerea	2411
Lichen punctiformis	2412
—— acicularis	2385
—— perforatus	2423
—— Sepincola	2386
—— fimbriatus	2388
—— digitatus	2439
—— pungens	2444
Fucus aculeatus	2445
Conferva spongiosa	2427
—— ciliata	2428
—— elongata	2429
Tremella moriformis	2446
—— Auricula	
—— arborea	

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